University of Alberta

Animal Capital:
The Material Politics of Rendering, Mimesis, and Mobility in North American Culture

by
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Abstract

At stake in what follows is the animal nature of capital - not only the animal signs and substances in which market cultures traffic, but also capital's biopolitical articulations of an immanent existence whose model is animal. Engaging with the heterogeneous field of cultural studies, and committed to a materialist post-Marxist critique, I develop the double entendre of "rendering" to theorize animal capital. Rendering connotes an act of aesthetic reproduction *and* an industrial traffic in animal remains. As such, it enables me to begin elaborating the violence and complicity of capital's contradictory representational and carnal economies, toward ultimately theorizing rendering as a double logic of mimesis.

I develop a material politics of rendering via three historical case studies. "Automobility" traces traffics in animal signs and substances across three early time-motion economies pivotal to mass modernity: the dis-assembly of animals in the Chicago stockyards, Eastman Kodak's manufacture of celluloid film stock, and Ford's assembly of automobiles. "Industrial Mobility" shifts to the neo-colonial time and space of oil sands development in the Canadian north, where I critically "take" the industrial tour offered by Syncrude Canada Ltd. I read the wood bison featured on Syncrude's tour as animal mascots mimetically managing the relation of transnational resource capitals to Aboriginal lands and labour. "Telemobility," lastly, tracks tropes of animal electricity through three telecommunications discourses: Luigi Galvani's early experiments on frog legs, Thomas Edison's filmed electrocution of an elephant, and the Telus corporation's deployment of simian signs in contemporary ad campaigns. To confront telecommunications capital with its pathological conditions and effects, I implicate Telus's market discourse in the geopolitics of coltan mining in the eastern Congo.

I glance, in the Postscript, at two crises symptomatic of the double logic of rendering: the crisis of simulacra, and the crisis of Bovine Spongiform Encephalopathy (BSE), or mad cow disease. They raise the challenge of articulating forms of political protest from within the double binds of rendering.

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Introduction

> "…the animal disappears in its suspension."
> - *Noëlie Vialles*, Animal to Edible (49)

Animal Capital

In 2002, *Maclean's* magazine - one of Canada's oldest national news weeklies - ran an advertisement configuring the nation as a beaver, spread like a dissection specimen across the page.[1] Its internal organization bared to encyclopedic view, pedagogical lines spoke out from the beaver's interior naming blood organs and body parts (see Figure 1). The ad caption consists of a few pithy words nailed beneath the splayed sign of the animal: "*Maclean's*. Canada. In depth." The equivalent standing of the two proper names in the caption – "*Maclean's*" and "Canada" – positions the media and the nation as virtually synonymous powers; the sobre black print of "Canada" is, if anything, overshadowed by the bolder "*Maclean's*," whose blood-red typography chromatically resonates with the red tissues and organs of the beaver. A third proper name and trademark appear in more circumspect red type at the top right hand of the advertisement: "Rogers," short for Rogers Communications Inc., the corporation which owns *Maclean's* and numerous other print, television, and electronic media. A trinity of proprietary names articulates with the deep vital signs of animal life in a mimetic move which naturalizes the complex conditions making possible each proper name and their combinatory power, dissimulating their profoundly political nature.

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[1] The beaver was one in a series of "dissection" ads published inside *Maclean's* magazine, as well as pasted as posters in public transit sites in Ontario, among other places. I came across it in *TransCanada Trail* magazine, Vol.8, No.1 Fall/Winter 2002. Other ads in the campaign depicted equally loaded metaphors of the nation, including dissected views of the Canadarm and the inside of a female hockey player's bag.

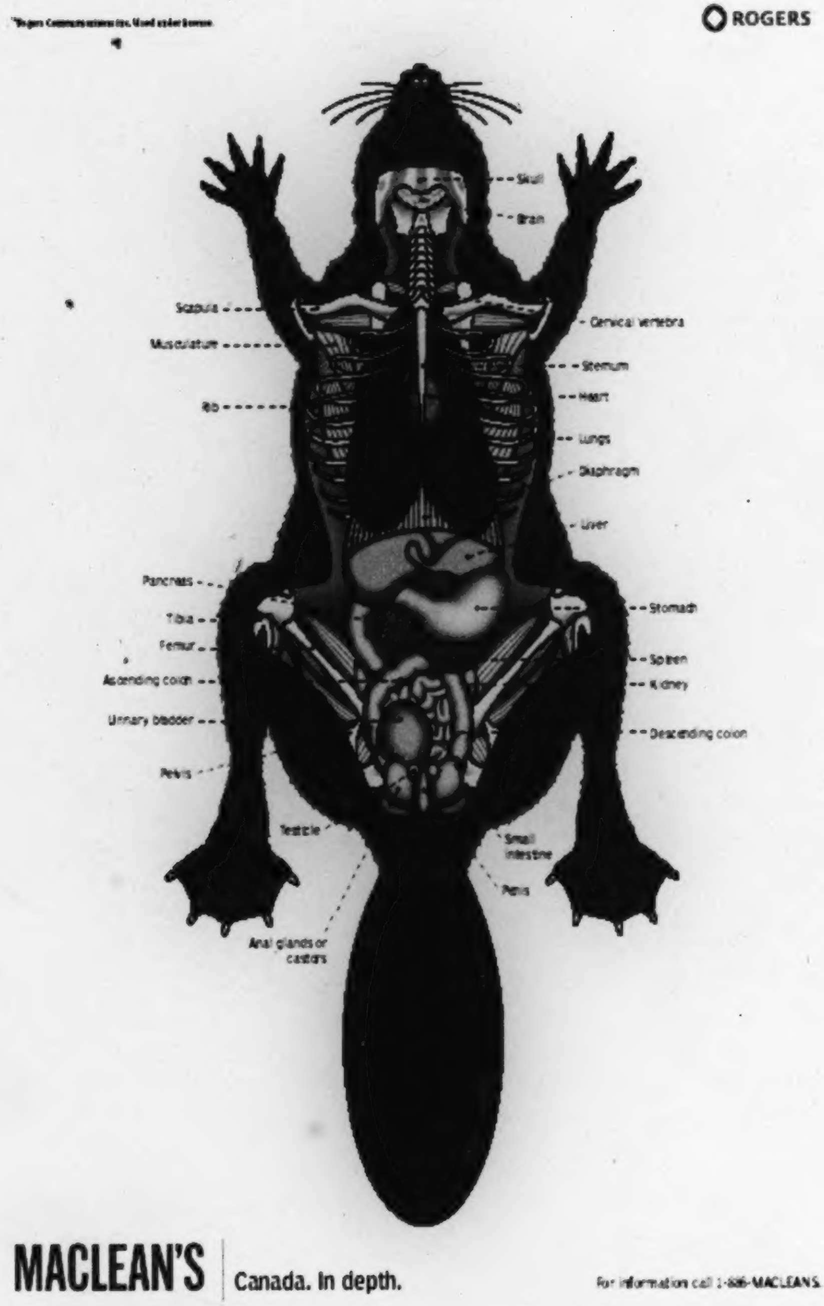
ROGERS
Skull
Brain
Scapula
Cervical vertebra
Musculature
Sternum
Rib
Heart
Lungs
Diaphragm
Liver
Pancreas
Stomach
Tibia
Femur
Spleen
Ascending colon
Kidney
Urinary bladder
Descending colon
Pelvis
Testicle
Small intestine
Penis
Anal glands or castors
MACLEAN'S
Canada. In depth.
For information call 1-888-MACLEANS

Figure 1. "*Maclean's*. Canada. In depth." (Reprinted with the permission of Rogers Communication Inc.)

The frequency with which the sign of the animal is attached to technological media in North American cultures of capital – arguably the most fetishistic and productive of all signs of nature put into mass mimetic circulation – will be a consistent concern of mine as I argue the urgency of decoding animal signs in market cultures of the nineteenth, twentieth, and twenty-first centuries. Animal tropes enciphering powerful agendas – the beaver being a case in point - often pass as innocent ideograms or natural signs. Yet Foucault was among the first to politicize how the sign of the animal ascends as an ordering trope in modernity, marking a shift to "untamed ontology" or "life itself" as the new object of biopower (*Order of Things* 278).[2] The probing gaze of science performed in the *Maclean's* ad, posing half-seriously as objective and comprehensive, is in fact tellingly selective; what do not appear as anatomically noteworthy are bodily extremities such as teeth, fur, tail, feet. The fascination with the insides of the beaver would seem to substantiate Foucault's claim that when life becomes the "sovereign vanishing-point" in relation to which power is reoriented, then it is the "hidden structures" of the animal, "its buried organs" and "invisible functions" that arise to encipher a biopolitical era (*Order* 277).

Articulating with the beaver's vitals is productive, in this case, of fetish-effects which Marx first theorized in relation to the semblance of life inspiriting commodities, fetish-effects which in this specific instance infuse "*Maclean's*" and "Canada" with animal musk and charisma. The burrowing inward through flesh to the biological springs of "life" marks a movement suggestive, too, of the infiltration and immanence of biopower. Repeatedly construed as being-in-the world and therefore incapable of apprehending a world (in the sense of setting it before one as an object of knowledge), animals represent a turn away from models of transcendence and inward to an order of immanence.[3] A shift to immanence suggests not only that power exchanges the omniscience of an overseeing god for the instinct and immersion of an animal (and in seeking to become immanent seeks to become animal), but also that resistance to power can no longer imagine having the vantage of an "outside" from which to view the world as an object, and is bound to immanent critique.

---

[2] Foucault clearly maps the notion of biopower in "Right of Death and Power over Life," the last chapter in *The History of Sexuality* (Vol. 1). As he writes there, "the beginning of an era of 'biopower'" can be discerned in a historical shift from the sovereign power to administer death, to "a power that exerts a positive influence on life, that endeavors to administer, optimize, and multiply it" (140, 137).

Michael Hardt and Antonio Negri, in their theorization of a new imperial order of global capitalism which they term "empire," draw upon Foucault's work to outline "the biopolitical nature of the new paradigm of power" (23). Empire, they argue, bears the mark of what Foucault calls a "society of control," a diffuse exercise of productive power in which "mechanisms of command become ever more 'democratic,' ever more immanent to the social field, distributed throughout the brains and bodies of the citizens" (23). In such a biopolitical paradigm of power, hegemonic consent and participation in cultures of capital is solicited by means of discursive and affective technologies increasingly inseparable from the economic and material machinery of culture. As Hardt and Negri describe it,

> Biopower is a form of power that regulates social life from its interior, following it, interpreting it, absorbing it, and rearticulating it. Power can achieve an effective command over the entire life of the population only when it becomes an integral, vital function that every individual embraces and reactivates of his or her own accord. As Foucault says, 'Life has now become…an object of power'….Biopower thus refers to a situation in which what is directly at stake in power is the production and reproduction of life itself. (23-4)

I approach animal signs as nodal yet largely inconspicuous agents of "biopolitical production," as overdetermined metaphors as well as materials of "life itself" as power's elusive and ultimate "object" (Hardt and Negri, xiii).[4] The title of my dissertation – "Animal Capital" – aims to make transparent the often opaque productivity of capitalism's mimetic identification with signs of animal life, and its even more audacious pursuit of "becomings-animal" (Deleuze and Guattari, *A Thousand Plateaus* 292).[5] I would like "animal capital" not only to bring capital's fetishistic pursuit of an animal or immanent existence into view, but also to evoke the biological stock and animal substances materially mediating its hegemonic cultures. For since the "life" that is an ultimate object of power is simultaneously a symbolic and metabolic currency, the biopolitical "task of administering life" is at least two-sided (Foucault, *History of Sexuality* 139). Animal capital flips productively between the two-sided currency of life, between metaphorical *and* material economies or, as I will couch it over the course of this Introduction, between a logic of the specter and a logic of the specimen. Given the soaring speculation in animal signs as an aesthetic currency of market cultures at the same time as animals are reproductively managed as protein and gene breeders under chilling conditions of control, an interrogation of animal capital in this double sense – as simultaneously sign and substance of "life" - emerges as a pressing task of cultural studies. Indeed, a deliberately denotative reading of the beaver viscera metaphorized in the *Maclean's* spread suggests that the biopolitical currency of animal life is never only symbolic; the affective circulation of animal signs within cultures of capital is deeply complicit in a supplementary order of carnal control.

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[3] Animals' mode of being-in-the-world and hence their inability to apprehend a world is how Martin Heidegger, among others, describes the immanence (and in his case, "privation") of animal life. See Heidegger's *Poetry, Language, Thought* (1971) and Jacques Derrida's critique of Heidegger's discourse of animal privation in *Heidegger and the Question Of Spirit* (1989).

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[4] For a more traditionally Marxist theorization of capitalism's relationship to the reproduction of "life itself," see James O'Connor's *Natural Causes: Essays in Ecological Marxism* (1998). There O'Connor argues that "capitalist threats to the reproduction of production conditions are not only threats to profits and accumulation, but also to the viability of the social and natural environment as *means of life and life itself*" (12).

[5] I borrow the notion of becoming-animal from the work of Gilles Deleuze and Felix Guattari (*A Thousand Plateaus; Capitalism and Schizophrenia* 292). While Deleuze and Guattari tout the subversive power of becomings, I am more concerned with how biopolitical cultures of capital - through a mix of aesthetic and material technologies – graft themselves onto animal life. Deleuze and Guattari do note, however, that "[t]he politics of becomings-animal remains, of course, extremely ambiguous. For societies…have always appropriated these becomings in order to break them, reduce them to relations of totemic or symbolic correspondence" (247-8).

Whereas Marxist theory has traditionally focused on the organization of class and of labour time as all-determining of what Marx, in *Capital*, terms "the magnitude of the value of a commodity" (52), I will attempt to theorize capital in relation to its mimetic conditions of existence, or what Theodor Adorno and Max Horkheimer call the "organization of mimesis" (qtd. in Taussig, *Mimesis* 47). In critical response to Marxisms' reductive focus on economic relations of production and class antagonism as necessary historical motors driving capitalism toward a socialist future, several prominent post-Marxists (Althusser and Balibar, Foucault, Laclau and Mouffe, Hardt and Negri) have theorized the discursive conditions and contingencies of capitalist hegemonies. I explore, similarly, how the organization of mimesis is pivotal to the biopolitical reproduction of capital. More than foregrounding the mimetic productivity of animal signs, I hope to bring into view the means by which cultures of capital organize – and biologize – mimesis itself under the sign of animal life. As will emerge, part of the aim of my dissertation is to call into question a popular rapture with the alterity of mimesis in twentieth-century cultural and theoretical texts, particularly with the desire to project mimesis back through a natural history of animal signs.

Yet locating the mimetic productivity of capitalism exclusively within an "economy of signifiers," as Jean Baudrillard proposes to do in his "semiological reading of Marx" and in his theorization of *simulacra*, alternately risks reducing the material means of mimetic power to a matter of irrelevance (Pietz 120).[6] Following from Saussure's claim that "*language is form and not a substance,*" linguistic value, like exchange-value, begins to assume aesthetic autonomy in semiological reductions (*Course in General Linguistics*, 89). Indeed, what gets lost in both an essentialist insistence on the economic referent and a semiological insistence on the arbitrary signifier is the substance of the sign, the contingent materiality of cultural mimesis. As Régis Debray argues in *Media Manifestoes: On the Technological Transmission of Cultural Forms*, semiotics frees thought from the "*referential illusion*" only to itself fall prey to a fantasy of pure code (50). Debray contends that a "mediology" is needed to remedy the "*semiotic illusion*, in order to again find a strong reference to the world, its materials, its vectors and its procedures" (50). In examining the mimetic power of biopolitical cultures of capital, it is crucial to remember the "bio" – the carnal conditions and effects inextricably coupled to any "economy of signifiers."

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[6] William Pietz critiques the "semiological reading of Marx" in far greater detail in his essay "Fetishism and Materialism: the Limits of Theory in Marx" (*Fetishism As Cultural Discourse*, 1993).

Toward the elaboration of a material politics of mimesis in biopolitical cultures of capital, then, I will pressure traffics in animal signs up against traffics in animal substances. The contradictory stakes which cultures of capital hold in nature as at once sheerly metaphorical and merely material stock, can be theorized as a logic – or rather illogic – of *rendering*. The double entendre of "rendering" is evocative of contradictory yet complicit metaphorical and material economies, and is particularly apt in relation to animal signs. For if rendering on the one hand describes the aesthetic practice of depicting an object in linguistic, painterly, musical, filmic, or other media (new technologies of 3D digital animation are, for instance, called "renderers"), it also references the industrial boiling-down of animal bodies. Rendering signifies an act of aesthetic reproduction *and* a carnal traffic in animal remains. Rendering's double sense is, I contend, supremely productive for cultures of capital, and begins to describe the biopolitical organization of mimesis within cultures of capital.

Before more closely mapping rendering as a mimetic double logic productive of contradictory currencies of animal capital, I want to return to the *Maclean's* beaver ad, for two reasons. Firstly, I want to unpack my claim that animal signs are nodal technologies of biopower organizing capitalism's metaphorical and material conditions of cultural reproduction. Secondly, I want to begin chipping away at the compound rhetorical and economic investments cementing signs of animal life to cultures of capital, and by prying loose capital's metaphorical and material hold to open up the sign and substance of animal life for other articulations. Rather than representing an effort to remove animal signs from the political field, my attempt to dis-articulate "animal" and "capital" is intended to show that the "nature" of capital is neither natural nor necessary, but precisely articulatory – partial and political.[7]

What, then, does the stock sign of the beaver mimetically relay in the *Maclean's* text? I say stock because the beaver is already stuffed with centuries of code as a sign of colonial contact and commerce, replete with moth-eaten stereotypes of the fur trade and with nostalgia for an era of noble yet ostensibly doomed indigeneity. Nearly wiped out by the turn of the twentieth century, the beaver subsequently enciphers the discourse of wildlife conservation (as well as the fantasy of going native) inscribed by the life and writings of Grey Owl.[8] In 1975, the beaver is instated as Canada's official emblem, a tool of affective governance deployed to involve Canadians in the project of national identity.[9] Overdetermined by these and myriad other symbolic and economic investments, it is the stocked beaver and all of its webbed associations which is invoked by a media agency to coordinate a different conjuncture of knowledge, nation, and capital in 2002: *Maclean's*, Canada, Rogers.[10]

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[7] Ernesto Laclau and Chantal Mouffe develop a theory of articulation and hegemony, proposing a different "*logic of the social*" (*Hegemony and Socialist Strategy; Towards a Radical Democratic Politics*, Second Edition, 3). As opposed to representational politics, "politico-hegemonic articulations" do not claim to transparently represent pre-existing subjects or social conditions, but recognize that they "retroactively create the interests they claim to represent" (xi).

[8] Grey Owl – born Archibald Belaney - was a British man who came to Canada, became involved in the fur trade, and passed as Ojibway. He married an Iroquois woman and subsequently pioneered a white conservationist, anti-fur movement through his sympathy for and early protection of the "beaver people." In 1999, Lord Richard Attenborough made a $30-million film on this Canadian "legend" simply entitled *Grey Owl*. Among the films and eleven books left by Grey Owl himself is *The Adventures of Sajo and Her Beaver People; with sketches by the author* (1935).

The animal dissection evoked by the *Maclean's* ad mimetically encodes an "in-depth" coverage of Canadian events. Peeling back the fur coat of Canada, the media discovers an immanent order in which essential organs occupy fixed cavities and functions in the natural sign of the nation. The beaver - a somatic diagram of vital parts lodged within the animal whole – operates as a trope to imply that the multiple constituencies of Canadian culture fit with biological or divine necessity inside the nation's deep structure. That Canada historically originated as a European settler colony founded on the displacement of indigenous peoples gets cunningly obscured, as the sign of the nation assumes the seemingly irreducible indigeneity of a native species. There is little allowance for immigrant organs in this indigenous figure of the nation, nor for organ implants or transplants; to be authentically Canadian means to belong inside an animal morphology whose constitution is biologically fixed.

If an essentialist image of an animal-nation is the predominant effect of the *Maclean's* ad, a naturalization of the powers of the media is also mimetically advanced. By articulating a paradigm of in-depth reportage to the figure of the animal body – presented as guileless graphic or raw footage - the *Maclean's* ad helps divert recognition of the media's power to *produce* the subjects and knowledges it appears to simply uncover and relay. Unlike the colonial capital of the early Hudson Bay and Northwest Companies, *Maclean's* no longer traffics in the beaver as a carnal currency (a pelt), but solely as a symbolic currency. *Maclean's* - insofar as the nation's inner workings, even its elusive identity or soul, is its business - has a purely rhetorical stake in the sign of "life" evoked through the biological trope of the wild animal's vital organs. The literal rendering of the animal specimen as a sheerly carnal schema constitutes a mock discourse on the *metaphysical* life of the nation. Or rather, the animal sign functions as a biopolitical switchpoint through which physical and metaphysical, literal and figurative economies of sense, turn into and upon each other.

---

[9] The beaver had been coined as a symbol of colonial commerce and nationality long before its "official" signing-in in 1975. In 1678 the Hudson Bay Company put the beaver on the shield of its coat of arms. An eighteenth-century silver Canadian trading token valued at 10 beaver pelts was smelted in the totemic shape of a beaver. In 1851, the first Canadian postage stamp - the "Three Penny Beaver" – was put into circulation. And in 1920, the Hudson Bay Company published a magazine entitled *The Beaver*, which is still in publication today.

[10] Well-known for the ranking of Canadian universities it publishes each year, *Maclean's* in this sense subscribes to institutions of "knowledge" and articulates with academic cultural capital.

That the beaver was, throughout fur trade history, the animal capital ("made beaver") through which Aboriginal sovereignties were sometimes explicitly, sometimes surreptitiously, exchanged for a white sovereign national identity suggests, contrary to *Maclean's* naïvely literal rendering of the national body and soul, that animal signs mediate virulent colonial and neo-colonial relationships, and are far from historically innocent. The fact that "testicle" and "penis" are included in the biological science of the specimen (alongside "spleen" and "stomach") genders the national ontology *Maclean's* claims to uncover, another compelling reason to be alert to the discriminatory discourses communicated through the ostensibly guileless sign of the animal. The *Maclean's* ad implies that to be native to this land is to identify with a biological image of maleness and Canadianness, conditions which disqualify those subjects (i.e. First Peoples, feminists, immigrants) who resist symbolic structures of identification organized around the neo-colonial nation-state and its phallic power.

Crucially, however, the messages relayed through the sign of the animal mimetically organize and affect more than human subjects; the ad most obviously and, it seems, innocuously, renders a logic of animal life. It is a logic – or rather illogic - which accepts the splayed carcass of an animal as a metaphysical sign of life, in this case the unified spirit of the nation.[11] While rendering extends to a logic of political communication deployed to discriminate, manipulate, and manage profitable differentials of race, gender, class, nation, and religion for cultures of capital, the bulk of my efforts will go toward problematizing the organization of species – the mimetic identity and difference of *anthropos* and animal – calibrated through complicit literal and figurative economies of rendering.

Animal Metaphor

Indeed, the trope of animal dissection in *Maclean's* beaver ad arguably protects the literal rendering of animal bodies as one of the material conditions of its metaphor, even as metaphor's supplementary economy of sense. To critically engage with the productive illogic of rendering requires formulating a material politics of mimesis capable of challenging the powerful mystique of animal metaphor. Metaphor is ubiquitously identified as an animal structure not only in popular market and media discourses (i.e. the *Maclean's* ad), but in contemporary theory as well, appearing among other places in the work of John Berger, Jacques Derrida, and Akira Mizuta Lippit. A politics of rendering contests the notion – admittedly couched with considerable variances by three authors differently committed to interrogating the reduction of animals as a founding condition of modern "Man" - that tropological structures (i.e. metaphor) have a preternatural affinity with animal life. Fascinated with the animal alterity of metaphor and other rhetorical structures, Berger, Derrida, and Lippit in different ways formulate metaphor as an enigmatic communiqué tracing back to a primal source in animal life, from which it infests linguistic sense and unsettles the doxa that language is human.

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[11] While I use the beaver as an entry into the politics of rendering, over the course of my dissertation it will become clear that the sorting of animals into aesthetic and material currencies often conforms to ideological distinctions between "wild" and "domestic" animals. The rendering industry historically institutes and reifies this distinction, subjecting domestic species such as pigs, cattle, and chickens to a mass slaughter that has come to be almost unthinkable in relation to "wild" animals.

In his famous essay "Why Look At Animals," for instance, John Berger critiques the marginalization of animals in capitalist modernity by invoking a pre-capitalist relation of human and animal mediated in the first instance by metaphor. Writes Berger:

> The first subject matter for painting was animal. Probably the first paint was animal blood. Prior to that, it is not unreasonable to suppose that the first metaphor was animal. (5)

The politics of metaphor, the organization of mimesis, disappear in this primal scene of rendering. By tracing an ancient bloodline between metaphor and animal life, Berger runs the danger of obscuring how the rendering of animals marks the site of a political and historically contingent, rather than ancestral or eternal, order of mimetic power. For rendering, at least as I theorize it, marks the site not of a natural but of a political relationship to the sign and substance of animal life. By valorizing metaphor as a remnant of an originary relationship to animal life, Berger unwittingly plays into market cultures' own interests in de-politicizing metaphor, in naturalizing the power to produce relations of likeness, i.e. abstract exchangeability, between unlike things. As Mark Seltzer suggests in his study of naturalist discourses of turn-of-the-century North America, the "generalized capacity of 'combining together' dissimilar powers and objects, drawing into relation and into equivalence 'distant' orders of things such as bodies, capital, and artifacts: this *logic of equivalence* is the 'classic' logic of the market and of market culture" (*Bodies and Machines* 51). In other words, "the logic of equivalence that is taken to define the market makes metaphorics and the market two ways of saying the same thing" (Seltzer 84). The picture Berger paints of metaphor's animal origins thus inadvertently helps to naturalize the mimetic power of market cultures.

Derrida, from the very different theoretical vantage of deconstruction, raises animals as specters or trace-figures haunting western metaphysical discourses. Animals in Derrida's work often dangerously double as "first metaphors" (to borrow from Berger) for the ineluctable traits of deconstruction – for the tracings, spacings, and supplements which estrange every sign of presence.[12] I want to excavate, in particular, a covert figure of animality lurking in Derrida's long-awaited reading of Marx, *Specters of Marx: the State of the Debt, the Work of Mourning, and the New International* (1994). For a non-transparent articulation of spectrality and animality in *Specters of Marx* risks annulling Derrida's efforts in a later text - "The Animal That Therefore I Am (More to Follow)" - to deconstruct the reductive category of "the animal" in favour of "an irreducible living multiplicity of mortals" (409). Contrary to his invocation of the "unprecedented" and "monstrous" conditions facing animals in the zoos, feedlots, abattoirs, holding pens, corrals, and laboratories of western culture ("The Animal" 394), Derrida's deconstruction of commodity fetishism in *Specters of Marx* risks putting a materialist critique of life in biopolitical times under suspension, by virtue of formulating the "bodiless body" of the specter and animal life under a similar logic (*Specters* 151). I will devote a moment to examining the resonance in Derrida's treatment of specters and of animal life in view of its ramifications for a politics of rendering.

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[12] If one takes Derrida at his autobiographical word, animals indeed take on the status of a first metaphor for every figure of deconstruction evolved over his career. For ever since he began writing in "a deconstructive style," remarks Derrida, ever "since I began writing in fact, I have sought to dedicate [the arguments of deconstruction] to the question of the living and of the living animal. For me that will always have been the most important and decisive question. I have addressed it a thousand times, either directly or obliquely, by means of readings of all the philosophers I have taken an interest in…("The Animal" 402).

In *Specters of Marx*, Derrida contends that the fetishism of commodities is not a "false" ideological effect which can be exorcised, as Marx suggests, through a demystification of the relations of capital, but is rather an effect haunting every presence, every use-value, and every mode of production. There is *no* production, Derrida contends, that is not riddled with a fetish or "*spectrality effect*" (40). "[A]s soon as there is production, there is fetishism" (166). If there is an end to spectral special effects, declares Derrida, it is "[o]nly beyond value itself" (166). One of the potential dangers of Derrida's deconstruction of fetishism as an animation effect specific to market culture, however, is a dilution of the historical particularity of capital within an a priori, transhistorical order of universally haunted production. Troubling, too, is how Derrida covertly articulates now transhistorical and seemingly inevitable spectrality effects to the figure of a primal and compulsive animality.

Signs of animality steep Derrida's close engagement with the famous passage, in *Capital,* in which Marx compares the turning of use-values into spectral exchange-values to a table-turning séance. The fabulous table appears in a section entitled "The Fetishism of Commodities and the Secret Thereof," where Marx writes:

> …so soon as it [the table] steps forth as a commodity, it is changed into something transcendent. It not only stands with its feet on the ground, but, in relation to all other commodities, it stands on its head, and evolves out of its wooden brain grotesque ideas, far more wonderful than 'table-turning' ever was. (82)

Purportedly paraphrasing "as literally as possible" the scene in which the commodity assumes life, Derrida writes that the table "seems to loom up of *itself* and to stand all at once on its paws" (149). Paws? The table "has become a kind of headstrong, pigheaded, obstinate animal that, standing, faces other commodities," writes Derrida (152). Again, "[b]ecome like a living being, the table resembles a prophetic dog that gets up on its four paws" (153).[13] In arguing against fetishism as an effect specific to capital, Derrida insinuates tropes of animal life to raise spectrality as a *différance* immanent to all earthly power and production. Derrida particularly favours the figure of a "headstrong dog," possibly because "dog," as palindromic for "god," helps him to configure spectrality as an immanent rather than transcendent effect, and what he terms "hauntology" as a species of immanent critique (155).

Derrida thus insinuates the image of a compulsive becoming-animal into Marx's passage under the guise of a "literal" paraphrase. Yet it is widely held that Marx inscribes the fetishizing movement as an impersonation, or anthropomorphization, of the commodity. The use-value which at first stands on all fours (the quadruped posture of the table is at least, if not more, suggestive of animal life than the imposture of exchange which Derrida configures as animal) gets overruled by the "grotesque" hegemony of a humanist ideology which valorizes ideationality and visuality over other sensory economies of terrestrial life.[14] Inverting the usual sense of the passage, however, Derrida *animalizes* the de-materializing movement of fetishism. He identifies animal life not with the four-legged figure of use-value which gets hamstrung and drained by an abstract logic of exchange, but with the "pigheaded" apparition, with exchangeability as a pugnacious potentiality immanent to every value. It is by configuring exchange as a primal animal alterity which precedes and exceeds the historical relations of capital that Derrida deconstructs the specific mystique of commodity fetishism, and develops a global logic of spectrality in its place.

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[13] While Derrida reads the passage in the original German, as I cannot, it is clear that the evocation of "paws" and of a "prophetic dog" is entirely Derrida's.

[14] I think, here, of Freud's description in *Civilization and its Discontents* of the pivotal moment when humans began to walk upright, initiating an "organic repression" of animality and "a shift in the sensorium," as Cary Wolfe puts it, "from smell to sight, the nose to the eye, whose relative separation from the physical environment thus paves the way for the ascendency of sight as the sense associated with aesthetic, contemplative distance and sensibility" ("*Faux* Post-humanism, or, Animal Rights, Neocolonialism, and Michael Crichton's *Congo*" 118).

The draining of historical materiality out of the sign of animal life risked by Derrida's insinuation that animals are spectral powers also threatens the animal genealogies he initiates in "The Animal that Therefore I Am (More to Follow)." Although Derrida starts this essay with a singular historical encounter between himself and his cat – "a real cat," he insists, not "the *figure* of a cat" (374) – she quickly dissipates into spiritualistic terms deeply resonant with those Derrida uses to describe the becoming-animal of the commodity, not to mention the visitation of the ghost of Hamlet's father in Shakespeare's drama. For if, in revisiting the "sensuous non-sensuous" commodity theorized by Marx, Derrida surreptitiously infuses the specter of exchange with unprecedented traces of animality, *Specters of Marx* opens with a meditation on the ghost of Hamlet's father in which Derrida describes him in commodity terms, as a "Thing that is not a thing" (6). The ghost of Hamlet's father is only able to appear on the phenomenal stage, claims Derrida, by donning a body "armor" or "costume," a "kind of technical prosthesis" which constitutes "a body foreign to the spectral body that it dresses" (8). Focal to the prosthetic thing-body of the specter, moreover, is what Derrida terms its "visor effect," its unsettling gaze through slitted head armour (7). Pivotal to the spectral visitation, in other words, is the visual sense that "[t]his spectral *someone other looks at us*, [and] we feel ourselves being looked at by it, outside of any synchrony, even before and beyond any look on our part, according to an absolute anteriority" (7).

Similarly, Derrida's cat is immediately staged within the scene of an "*animalséance*," a charged locking of gazes in which the human, in this case Derrida himself, is "caught naked, in silence, by the gaze of an animal, for example the eyes of a cat….the gaze of a seer, visionary, or extra-lucid blind person" ("The Animal" 372). His cat is introduced, that is, within the logic of the specter. As with the ghost of Hamlet's father, the scene pivots upon a visor effect, upon the startling anteriority of a spectral gaze which, as Derrida puts it in this instance, spawns the abyssal situation of "seeing oneself seen naked under a gaze that is vacant to the extent of being bottomless" (381). The spectral animal visually channels the disquieting half-presence of a "life" never fully given to terrestrial Time, History, and Being.[15] By framing his encounter with his cat in the same terms he uses to frame the ghostly visitation of Hamlet's father, Derrida risks collapsing the material difference between the body of a living animal and the prosthetic armor of a fictional specter, conflating an animal's embodiment with the "paradoxical corporeality" of the prosthetic dress which the spirit of Hamlet's father dons in order to make an appearance on the historical stage (*Specters* 8).

Meeting the "bottomless gaze" of a spectral animal dislocates, for Derrida, the positivity and priority of the human subject ("The Animal" 381). Yet the "real cat" which Derrida takes pains to distinguish from a simply tropological function is transubstantiated, despite his protestations, into one figure in a line of suspenseful figures emptied of historical substance and summoned to deconstruct an ontological "sign of presence" (*Specters* 27). Is a materialist critique of life in critical biopolitical times – a politics of what Derrida himself raises as "the industrial, mechanical, chemical, hormonal, and genetic violence to which man has been submitting life for the past two centuries" ("The Animal" 126) – possible when animals are summoned as specters with at best "an appearance of flesh" on their "bodiless body," when they are assigned to a limbo economy of life and death, and thus positioned as never entirely subject to histories of violence and exploitation (*Specters* 151)? Doesn't the thinking of the animal as specter risk de-politicizing the argument which Derrida simultaneously makes in "The Animal that Therefore I Am" for animals as mortal creatures vulnerable to the capitalizing machinery of the past two centuries? If on the one hand Derrida initiates a politics of animal sacrifice specific to "carno-phallogocentric" cultures of the west ("Eating Well…" 113), on the other hand he remains transfixed with animals as first metaphors for *différance* as an uncanny force undermining an order of western culture which he still assumes is invested in presence. Derrida's cat – herself an engineered product of material institutions of pet ownership which Derrida occludes by declaiming her "absolute alterity" ("The Animal" 380) – is ultimately suspended as a historical subject and rendered an arch-figure of deconstruction.

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[15] As with Berger and Lippit, who both focus on the fascinated look which passes between human and animal, Derrida privileges the eyes and a transferential gaze over more material, tangible communications of animals, such as the rubbing of a cat against a leg, or purring. The privileging of visual communication allows for the de-materialization – spiritualization - of the animal (following from the canonical trope that the eyes are the "window to the soul").

I don't take issue with Derrida's efforts, alongside those of theorists such as Paul de Man and Hayden White, to undermine claims to self-evident presence by insisting that they are ineradicably haunted with traces of the tropological. What is at stake, rather, is how a deconstructionist logic of the trace, the supplement, or the specter, may itself get surreptitiously reified through its articulation to talismanic signs of animality. It's crucial to consider how a logic of spectrality itself gets fetishized even as Derrida is at work deconstructing fetishism as an ideological effect. For the metaphors of the "pigheaded" animal and "prophetic dog" which lace Derrida's deconstruction of Marxian ideology critique, and which animate the logic of spectrality which he offers in its stead, are far from transparent. That the animal specter may itself covertly function as a fetish within deconstruction (a site where a transcendent foundation gets reconstituted in the immanent form of an animal-god) is matter for concern, given that articulations of animality and spectrality can serve either to fill in the empty moves of deconstruction with the carnal presence which animality canonically connotes within western modernity, or conversely, to drain animals worshipped as living metaphors of *différance* of their historical specificity.

Allow me to pinpoint, before moving on, the "aesthetic" effect of Derrida's articulation of spectrality and animality which perhaps most imperils a materialist purchase on biopolitical cultures of capital. According to the logic within which Derrida invokes animal life, specters simply *are* (or rather *appear*, since the ontological is precisely what an apparition perturbs). To suggest that specters perturb hegemonic structures of power assumes that they appear out of some ghostly volition from within immanent fissures in architectures of presence. A politics of rendering, by contrast, proposes that animals are *produced* as spectral bodies by capitalizing agencies heavily invested in suspended signs of animal life. Whether it be as semiotic or as biological stock, whether on reserve as mediatized sign or as mere material, animals and other signs of nature are kept in a suspension state of what Derrida himself terms "interminable survival" ("The Animal" 394). It is difficult to dissociate the logic of the specter from a biopolitical logic of capitalization bent on producing, administering, and circulating life as an undying currency. Capital, in other words, is not only invested in the metaphysics of presence which Derrida critiques than in the spectral logic of a "paradoxical corporeality" which endlessly "survives."[16] As Antonio Negri suggests in this vein, "deconstruction remains prisoner of an ineffectual and exhausted definition of ontology," one which can no longer be assumed to correspond to the dominant means and effects of power ("The Specter's Smile" 12). Derrida himself draws attention to a biopolitical violence constituted by the power to keep animal life in a limbo economy of "interminable survival" as much as by the pathological power to dispense death to animals and extinguish species. Nor is he unconcerned with the rising hegemony of "tele-technologies," or spectral media (*Specters* 53). Whenever Derrida addresses biopolitical signs of life in material history, that is, he comes close to acknowledging that spectrality may now constitute a means and effect of power, rather than an uncanny disturbance which power seeks to quell.

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[16] Derrida uses the word "survival" to describe both the intolerable conditions of animal life *and* the para-ontology of the specter: it is "neither dead nor alive, it is dead and alive at the same time. It survives" (*Specters* 153).

To borrow the argument which Michael Hardt and Antonio Negri leverage in *Empire*, the logic of the specter offers little resistance to hegemonic market cultures increasingly geared toward biopolitical production. Globalizing market cultures advance biopolitically, argue Hardt and Negri, by exploiting and producing the aporias, ambiguities, and in-between states which postmodernist and hybridity theorists have deemed resistant. "The affirmation of hybridities and the free play of differences across boundaries," they write, "is liberatory only in a context where power poses hierarchy exclusively through essential identities, binary divisions, and stable oppositions" (142). The logic of the specter, likewise, is perturbing only within a field of power invested in binaries of life and death, presence and absence, specie and speculative value – binaries which capital, in its "necromancy," has arguably always exceeded (Marx, *Capital* 80). If biopower strategically disregards "binaries and dualisms" when it is to its advantage to do so, I would add that as a mode of power it may be more invested in exploiting than in exorcising a logic of supplementarity confounding essentialist hierarchies. It is therefore crucial to consider that Derrida's *animalséance* may reinforce rather than trouble "the spectral reign of globalized capitalism" (*Empire* 47). Rather than raising a disturbance, the logic of spectrality risks raising returns on capital, especially returns on animal capital.

That said, resisting the spectralization of animal life does not mean reverting to an equally perilous empiricism which would fixate upon animals as carnal proof of presence. As the double sense of rendering suggests, the logic of the specter and the logic of the specimen (conceived as a reduction of animals to their disposable bodies) are flip sides of animal capital, and signal the double bind in which cultures of capital achieve a biopolitical lock on "life." If the draining of material histories out of aesthetic figures of undying animal life represents one valency of rendering, the empirical reduction of animals to bodily matter and substances is its double.

I have attended at some length to Derrida's work, since it constitutes one of the most sustained contemporary inquiries into discourses of animal life. However, the spectral animal invoked by Derrida also appears in the work of Akira Mizuta Lippit. As with Derrida's fascination with an animal specter which gazes upon Man from a paranormal time and space in which it is neither dead nor alive, in *Electric Animal: Toward A Rhetoric of Wildlife*, Lippit fetishizes animals as undying spirits which survive their mass historical "vanishing" from modern life to reincarnate in the technological media.[17] Lippit builds upon a Derridean notion of supplementarity to locate "traces of animality" in the technological media and in language, sites where a logocentric and anthropocentric symbolic is riddled with the ostensibly pathic communicativity of animals (26). Metaphor, suggests Lippit, is one such animal trace. Like Berger, Lippit fetishizes a primal relationship between "the animal and the metaphor." As he writes:

> One finds a fantastic transversality at work between
> the animal and the metaphor – the animal is already a

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[17] One has to ask just which animals Lippit considers to have terminally vanished from historical modernity. When livestock currently outnumber humans on the planet, Lippit remains invested in vanishing "wildlife" as a fetishistic cipher for all animal life. The animals which continue to be kept alive and put to death under abysmal conditions of control within cultures of capital take on the appearance of afterthoughts or aftereffects of a historical chapter of animal life whose epitaph Lippit has written.

> metaphor, the metaphor an animal. Together they transport to language, breathe into language, the vitality of another life, another expression: animal and metaphor, a metaphor made flesh, a living metaphor that is by definition not a metaphor, antimetaphor – 'animetaphor.' (165)

As animals "vanish" from historical modernity, Lippit continues, a spirit or trace of animality – ultimately an indestructible code - is salvaged by the technological media. Only by speculating in the animal as a metaphorical function surviving and transcending the death of its material referent, its historical body, can Lippit propose "a transfer of animals from nature to technology" (23). He contends that cinema, even more consummately than linguistic metaphor, "mourns" vanishing animal life, which it encrypts in its structure of communication (196). For cinema by-passes linguistic registers, Lippit argues, to communicate via rapid surges of nonverbal affect long associated in western culture with an animal's mesmerizing gaze and sympathetic powers of communication (196).

Throughout his stunning survey of western configurations of the animal as an undying, unconscious energy, Lippit nevertheless assiduously avoids considering the biopolitical production and discursive currency of animal affect. He renders affect, along with the animal signs to which it is fetishistically sutured, a pre-discursive and spectral force, strangely emptied of somatic sense. Affect begins to appear, in Lippit's text, as the insubstantial stuff of an instantaneous and anaerobic mimetic exchange (i.e. a transference). He surveys, without interrogating, psychoanalytic and philosophical construals of animal affect as a non-linguistic discharge of "pure energy" (196); Lippit has his own reasons for protecting such a discourse, given that the aesthetic theory of cinema which he develops also rides upon it (196). In proposing that animality survives the mass disappearance of historical animals and enters into the cinematic apparatus as its next, prosthetic carrier, Lippit amplifies the idea raised by Derrida that the body of the animal-specter is a kind of armour or "technical prosthesis" (*Specters* 8). Thus while *Electric Animal* constitutes a brilliant recapitulation of discourses of the "undying" animal in western philosophical, psychoanalytic, and technological discourses, Lippit ends up *buying* the idea of the undead animal which he surveys, and rearticulating it to an aesthetic theory of cinema (36).

"As with every bottomless gaze, as with the eyes of the other, the gaze called animal offers to my sight the abyssal limit of the human," writes Derrida ("The Animal" 381). At their best, the signs of animal life raised by Berger, Derrida, and Lippit unsettle presumptions that *Homo sapiens* is an all-powerful presence and self-same subject. Yet a growing theoretical infatuation with spectral signs of animal life may inadvertently excite aesthetic effects and material currencies serving the intensifying hegemony of market life. The becoming-animal of capital – the organic and immanent hegemony pursued through its mimetic modes of production – marks the site of a harrowing occupation of "life" which I will examine in my case studies. Indeed, a significant portion of my dissertation will be devoted to analyzing how the ostensibly organic affinity of animal life and mimesis is an effect of power relayed not only through the popular media, but often through theories of mimesis themselves. Given the unrelenting animalization of mimesis in both mass cultures and critical discourses of the west, my own work will undoubtedly be complicit in unwitting reductions of animal life. If nothing else, rendering describes the temptation and threat of *reduction* facing any engagement with animal signs. However, by pursuing a material politics of mimesis via a theory of rendering, I hope at least to expose the disavowed supplementarity of the metaphorical and material logics which trap nature for capital.

Mimetic Power: Copy and Contact

The *Maclean's* ad has served not only to introduce animal signs as my focal concern, it has also allowed me to implicate the duplicit currencies of animal capital in the "organized control of mimesis" (qtd. in Taussig, *Mimesis* 68). Metaphor is just one of the mimetic technologies I will implicate in capital's biopolitical organization of mimesis; mascotry and "monstration" are other mimetic modes organizing cultures of capital and coming under examination in my case studies insofar as they support capitalisms' productive illogic of rendering. I hope it is clear by now that I theorize rendering as an illogic specific to capitalist biopower, illogical in the sense that contradictory symbolic and material stakes in animal life are pursued in a relation of disavowal to continuously recreate not only the effects, but also the conditions of possibility of capital. I hope, too, that I've made apparent how a theory of rendering's illogic builds upon post-Marxist contentions that capital's conditions and effects are simultaneously material and symbolic, that is, *discursive*.

Rendering is the term I use to engage with this illogic, since as I've remarked it connotes two linked economies whose disavowed complicity is profoundly productive for cultures of capital. Again, rendering indexes both economies of representation or of the arts (the "rendering" of an object in paint, clay, film, digital media, etc.) *and* resource economies trafficking in animal remains (the "fat-splitting" industry which recycles animal trimmings, bones, hides, offal, blood, and so on back into market cultures). In my broad approach to mimesis as a cultural "faculty" or "power" which gets naturalized as animal, I argue that there is allowance for movement and slippage across the contradictory economies syntactically evoked by rendering. Rendering thus enables me to theorize mimesis not only as a representational economy of copying, but as a material logic of cultural reproduction at work, among other places, in the mass moving lines of abattoirs and rendering plants.

Against aesthetic theories of mimesis in texts such as Erich Auerbach's *Mimesis: The Representation of Reality in Western Literature* (1953), which considers mimesis solely as a literary or representational act, rendering tracks how mimesis is always also an economic, material, sensuous exercise of power. Rendering suggests that the "organization of mimesis" is never simply the province of the so-called culture industry, as Adorno and Horkheimer imply, a domain predominantly associated with mass culture as a field of entertainment and aesthetic production.[18] The mimetic organization of mass cultures of capital involves, I argue, materialities of production also indexed by rendering as a profoundly physical logic. The illogic accommodated by the syntactical double sense of rendering is indeed suggestive of biopower's capacity to mobilize contradictory metaphorical and material economies without inflaming glaring *non sequiturs* between them. For instance, capitalist cultures are able to circulate animals as organic (if empty) metaphors of technological mobility at the same time as they accelerate a material traffic in animal parts and proteins; rather than undercutting its cultural hegemony, such contradictory currencies of animal life are productive of capital.[19] Yet while slippage in the double entendre of rendering is productive of capital, the supplementarity of their mimetic sense is managed in strict disavowal to prevent the illogic of rendering from provoking political antagonism within cultures of capital.

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[18] Adorno writes that "the expression 'industry' is not to be taken too literally. It refers to the standardization of the thing itself – such as that of the Western, familiar to every movie-goer – and to the rationalization of distribution techniques, *but not strictly to the production process*" (my emphasis, "Culture Industry Reconsidered" 100).

[19] John Berger's contention that a dualistic relationship with animals was destroyed by the rise of capitalism is not what I'm arguing here. Berger contends that a pre-capitalist relationship with animals allowed for the revering of their symbolic powers *and* their material use. As Berger puts it, there was no contradiction between the peasant who loved his pig and who also salted away its pork. Instead of mourning the shattering of a dualistic relation to animal life as solely an *effect* of capitalism, as Berger does, I am suggesting that it is an on-going *condition of possibility* of capital - one of the discursive

Rendering also brings into view how mimetic power – the capacity of the copy to seize power over the thing copied, or what Michael Taussig terms the "magic of mimesis" (*Mimesis* 13) – involves not only reproducing a likeness, but also stealing a physical piece of the other to establish a pathological line of communication between bodies. Taussig suggests that it is through the double magic of copying *and* contact that a model comes to fetishistic life at the expense of its "original." A clipping of hair, skin, nail, clothing - of anything that has been in contact with the host body - is invested with a talismanic charge from its physical contiguity with the whole, providing affective access to it. Mimesis thus involves producing a representational likeness *and* manipulating a material, metonymic link to the other. Recalling James George Frazer's classification of two kinds of sympathetic magic in *The Golden Bough: A Study of Magic and Religion* (1911), "the magic of *contact*, and that of *imitation*," Taussig emphasizes "the two-layered notion of mimesis that is involved - a copying or imitation, and a palpable, sensuous, connection between the very body of the perceiver and the perceived" (21-2). Mimetic power thus accrues, again in Taussig's words, to both the magic of "the visual likeness" and to the "magic of substances" (50).

If one aspect of capitalisms' mimetic power accrues to how well representational technologies are able to execute a *vraisemblance*, another aspect doesn't operate at the level of representational fidelity at all, but rather by taking possession of a literal piece of the other through material apparatuses of capture and

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mechanisms through which capital is able to continuously re-create itself. See Berger's "Why Look at Animals?" in *About Looking* (1992).

modes of production. The talismanic incorporation of a piece of the other adds a material dimension to the mimetic execution, establishing a level of literal sense through which substance secretly reinforces sign. The sympathetic identification with animal signs encouraged in representational economies of capital accommodates, in other words, the pathological power to "contact" and manipulate the substance of animal life.

Taussig's notion of a "two-layered" mimesis helps to counter a persistent desire to de-materialize mimesis by reserving it for aesthetic or representational acts tacitly conceived as separate from economic practices. Yet while Taussig stirs up a sense of anthropological wonder around often exotic practices of "magical" mimesis, I aim to interrogate how metaphorical and material "layers" or economies of mimesis specifically reproduce and organize capitalist hegemonies. In other words, I suggest that powerful co-ordinations of the double powers of "copy *and* contact" signal not an inevitable mimetic dialectic, but rather a constantly calibrated effort supporting capital's conditions of existence and charismatic effects (21). For among all of the other social differentials productive of capital (most famously, the differential between necessary and extra labour time which Marx discerned as a source of economic surplus value), is one which capital continuously drives open between its powers of "copy and contact." By managing its sympathetic (metaphorical) and pathological (material) economies in a relation of disavowed supplementarity, I contend, cultures of capital also generate surplus through a division of labour within orders of mimetic power.

If, as I'm suggesting, technologies of representation and of contact operate complicitly, the first taking symbolic, and the second, material possession of animal life to reproduce the discursive conditions and effects of capital, one of the aims of a politics of rendering is to provoke antagonism within capital's contradictory modes of mimetic power. My critique of animal capital thus involves an attempt to pressure the double sense of mimesis, the illogic of rendering, out of a relation of supplementarity or productive contradiction, and into a political relation of antagonism and incongruity. If a *theory* of rendering takes as its critical object the biopolitical production and consumption of animals as metaphorical and material stock, a *politics* of rendering aims to antagonize what is normally managed as a productive differential between the signs and substances of animal life.

A politics of rendering is specifically intended to bring nonhuman subjects into political focus, and as such resists tendencies in race, feminist, postcolonial, and globalization studies to attend to animal signs as theoretical subsets of interest only insofar as they are deployed to animalize certain human subjects and to justify their abjection. Cary Wolfe makes a helpful distinction, in this vein, between the *discourse* of speciesism - a "constellation of signifiers [used] to structure how we address others of whatever sort (not just nonhuman animals)" – and the *institution* of speciesism (*Zoontologies* xx). "[E]ven though the *discourse* of animality and species difference may theoretically be applied to an other of whatever type," writes Wolfe, "the consequences of that discourse, in *institutional* terms, fall overwhelmingly on nonhuman animals" (xx). Like the "asymmetrical material effects" of the discourse of speciesism, the pathological violence of rendering also falls most heavily upon animal life (Wolfe, "*Faux* Post-humanism" 117).

That said, human subjects invariably get factored through an illogic of rendering that is never reserved only for the non-human. The sickening application of rendering as an animalizing technology of race comes into view with the license given "extreme rendering" at the turn of the twenty-first century. United States intelligence agencies, taking recourse to the 2001 attacks on New York's twin towers as the indelible mark of a new era in which the good life is suspended in a constant state of emergency, justify what has come to be called the "extreme rendering" of suspected terrorists to countries known to inflict torture on detainees.[20] The racialized terrorist is subject to a syntax of power, framed through the rhetoric of rendering or "rendition," in which hints of animal rendering insidiously blend with other political economies of sense. The physical work of pulverizing an animal body bleeds into the sense of rendering as a homeopathic delivery of justice (in this case the retributive justice of returning purported terrorists to torture cells in the global South). Both of these connotations further bleed into the sense of "rendition" as a work of art to ultimately link the turning over of detainees with the mimetic reproduction of culture, exciting an aesthetics of torture. *Renditions* – also the title given by the National Renderers Association to its weekly newsletter – likewise summons up the spirit of culture to aestheticize the politics of North America's traffic in animal life and death. Biopower arguably hails from just this slippery, supplementary transit between rhetorical flourish and carnal control that the composite sense of "rendition" accommodates, from the crossings and double-crossings of aesthetic and material economies of sense.

Rendering as a political syntax and a violent illogic accommodates multiple practices, dictions, and slippages. While flexible and accommodating, however, rendering as I theorize it is emphatically not an universal logic.[21] The double logic of rendering makes sense only in the context of biopolitical cultures of capital, even more specifically, as becomes clear in my case studies, within capitalist relations of nature, race, and labour. I turn now to two genealogies – one tracking discourses of industrial rendering, the other tracking theories of mimesis – to emphasize this critical point. Both in its industrial and aesthetic dictions, rendering needs to be considered in its specificity within biopolitical cultures of capital.

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[20] I am grateful to Maisaa Youssef for first drawing my attention to the practice of "extreme rendering" by way of a news story in a Lebanese newspaper (*The Daily Star*) entitled "The Perils of 'Extreme Rendering'" (Friday, June 11, 2004). As its author William Fisher notes, while extreme rendering or "rendition" has gained in currency since September 11th, it is not a new practice. "One must note that rendition began before Sept. 11, and was a policy of the Clinton administration after the bombings of the US embassies in Kenya and Tanzania in 1998." Extreme rendering enjoys, along with other U.S. human rights abuses, the status of a public secret: "There is ample evidence that Abu Ghraib-type prisoner abuses were known or suspected by many in Congress and some in the US media long before the photos taken by US soldiers in Iraq created a scandal. The same is true of extreme rendition."

The Returns of Rendering

> To render: 'to reduce, convert, or melt down (fat) by heating'; from Old French *rendre*, to give back. And indeed rendering does give back. Animal byproducts that would otherwise have been discarded have for centuries been rendered into fat which is an essential ingredient in the manufacture of soap, candles, glycerin, industrial fatty acids, and more recently of animal and protein meals as feed supplements for companion and meat-producing animals, poultry and fish.[22] (National Renderers Association, or NRA)

Rendering shares, with prostitution, the euphemism of being possibly the "oldest profession in the world." In an Errol Morris film, *Gates of Heaven* (1978), a rendering executive imagines the industry in the proverbial tense of the euphemism:

> Rendering is one of the oldest industries…it dates back to the time of the Egyptians. It could be the oldest industry in the world, it could be, it's possible.[23]

The words of the rendering executive in Morris's filmic text defer rendering to a mythic past, a popular gesture consistent with the official rhetoric of the industry. The first sentence of a rendering history in *The Original Recylers*, for instance, a book on the industry published in 1996 by the National Renderers Association (NRA), similarly euphemizes a capitalist economy of rendering by tracing its origins back to the immemorial beginnings of Time itself.[24] According to the NRA, the story of rendering traces back even earlier than the Egyptians, to the mythical moment when *Homo sapiens* breaks out of an enmired state of nature to inaugurate History through the act of cooking animals over a fire:

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[21] Nor am I suggesting that rendering is a *necessary* illogic, i.e. law, of capital. It is, rather, a contradiction that exists only for as long as it is productive of cultures of capital, that is, only so long as it helps organize economic and symbolic returns, while managing against political antagonisms.

[22] From an on-line publication, "North American Rendering: A Source of Essential, High-Quality Products," available on the NRA website at: <http://www.renderers.org/links/Nth%toREndering%20Book%20for%20website.pdf> (January 2005).

[23] *Gates of Heaven* ironically juxtaposes the irreverent reduction of the animal body in the boilers of the modern rendering plant with the reverent purchase of the perpetual peace of animal souls at the pet cemetery.

> Although rendering as an organized and cohesive industry has been around for only 150 years, the process of melting down animal fats to produce tallow and other fats and oils probably got its start when *Homo sapiens* began cooking meat over a campfire and saving the drippings. (*Original* 2)

Around this primal scene of rendering - in the loaded moment when the raw becomes the cooked as an inaugural mark of civilization - *Homo sapiens*, meat, fire, and cooking as the rudimentary technique of rendering, get etched as anthropological signs. Rendering as a modern and "cohesive" capitalist industry flickers in the mythic firelight of an originary human practice. The surplus captured by the modern industry is filtered through the light of the animal "drippings" gleaned by early *Homo sapiens* around the campfire, reflecting surplus value as nothing more than a natural remainder separated out through the primary technology of cooking. The scene suggests that *Homo sapiens* enters into the historical record the instant he discovers himself, through the act of rendering, to be *Homo oeconomicus*; industrial rendering is cast as simply the evolved and "cohesive" expression of an economizing impulse which first prompted a glimmer of historical sense in prehistoric Man (the revolutionary idea of saving drippings for the future) and launched humans upon the path of progress. Via this depiction of rendering, animal capital melts back into an archetypal figure of use-value: the age-old anthropological rite of using-every-part-of-an-animal.

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[24] *The Original Recyclers* was in fact a joint publication of the National Renderers Association, the Animal Protein Producers Industry, and the Fats and Proteins Research Foundation.

As dangerous as euphemisms which depict political cultures of prostitution under capital as merely the modern expression of a timeless and inevitable exchange, then, are euphemisms which install rendering as a sign of natural industriousness at work in the world since time-out-of-mind. For as I will argue over the next three chapters, all of the signs de-politicized by such a discourse on rendering – animal sacrifice, *Homo oeconomicus*, conservation, waste, and surplus value ("cooking meat over a campfire and saving the drippings") – possess a specific political character. Just as Gayle Rubin theorizes a "traffic in women" within symbolic and economic relations specific to capital (kinship systems, in particular), a theory of rendering brings into view a traffic in animals specific to cultures of capital ("The Traffic in Women: Notes on the 'Political Economy' of Sex" 1975). I offer a brief genealogy of rendering here to resist the proverbial powers of euphemism and to emphasize rendering's political specificity as a marginalized, malodorous, yet massively productive industrial culture of capital. While the primary purpose in the bulk of my dissertation will be to theorize rendering as a mimetic illogic encompassing yet exceeding its economic referent, I want first to review it as an *industry* deploying particular material and rhetorical technologies at certain historical junctures to reproduce cultures of capital.

Locating rendering as a capitalist industry immediately entails "splitting," however, since the animal recycle denoted by rendering has over the past few decades been usurped by the now-popular use of rendering to reference post-industrial cultures of digital animation. I've already suggested that in its modern usage, rendering has long accommodated a balance of power between its at least double connotations; it has popularly referenced representational economies as well as traffics in animal remains. At the turn of the twenty-first century the balance seems to have tipped, to the extent that rendering no longer hegemonically evokes the industry which breaks down animal hides, bones, blood and offal, but a burgeoning traffic in 3-D images of life assembled out of algorithmic bits of code. Digital culture appears to have successfully spirited away the bad affect associated with the boiling down of animal remains by reinventing rendering as a popular aesthetic notation for the new field of computer-generated images. The reinvention of rendering by digital culture arguably de-politicizes both industries, associating on-going traffics in animal material with technological virtuality, on the one hand, while identifying computer-generated graphics with biological stock, on the other. *RenderFarm*, the name given to facilities which yoke together hundreds of computer processors in order to harness the power needed to produce mass computer-generated images, provocatively articulates virtual with biological animal capital to coin a new technological aesthetic. Caught in the midst of the reinvention of rendering by digital industries, it's important to consider that rather than displacing its industrial double, computer rendering supplements and aesthetically recontextualizes it, enabling advanced capitalism to exploit contradictory aesthetic and biological discourses of animal life. For the present purposes, I confine myself to a genealogy of rendering as an industrial traffic in animal material, while nevertheless flagging the fact that what seem like two wildly divergent industries – the one organizing a recycle of animal bodies, the other a mimetic recycle of lifelike effects whose organic model is invariably animal – can be placed in political relation, via a theory of rendering, as complicit cultures of capital.

A genealogy of the rendering industry might begin by revisiting its relation to the industrialization of slaughter in Europe and North America in the nineteenth century. In her study of French abattoirs, *Animal to Edible*, Noëlie Vialles remarks that the word "abattoir" appears in France around 1806, "at the same time as Napoleon's major reorganization of slaughtering and butchering" (15). Napoleon's project of modernization involved, crucially, the "exile" of the sensoriums of slaughtering and rendering to outlying precincts far from the eyes and noses of an urban polity (Vialles 22). Public culture in the nineteenth century began to be sanitized and sensitized through myriad practices, disciplines, and reforms best discerned, perhaps, by Foucault. The institutionalization of enclosed, monitored facilities devoted solely to animal slaughter in compliance with new regulations and sensibilities around "suffering, violence, waste and disease, 'miasmas', and finally animals themselves," helped to materially and ideologically prepare conditions for the massification of slaughter (Vialles 19). "The quantities dealt with were henceforth on an industrial scale and called for suitable organization," writes Vialles. "It was a development that led…to the remarkable 'vertical' abattoirs of Chicago," where the mechanized moving-line production prototypical of Fordist capitalism would find one of its first applications (22).

The exile of slaughter to a "clandestine" space of public secrecy was reinforced, notes Vialles, with attempts to euphemize the industrialization of animal sacrifice (22). The term *abattoir* was coined to name "the 'no-place' where this massive and methodically repudiated slaughter" took place (23).

> The general meaning of *abattre* is 'to cause to fall' or 'to bring down that which is standing'. It is primarily a term in forestry, where it refers to felling; subsequently, it came to be used in the mineral world, where it denoted the action of detaching material from the walls of a mine tunnel. It also belongs to the vocabulary of veterinary surgery, and particularly when applied to a horse it means to lay the animal down in order… to give it medical attention. (23)

As euphemisms, *abattoir* and *abattre* sought to equate the "felling" of animals with the felling of trees or minerals (even with the veterinary treatment of a sick animal), so that "the slaughterer becomes a woodcutter, and blood is almost edulcorated into sap" (Vialles 23). Yet as Vialles adds, attempts to euphemistically deflect the violence of modernized slaughter often failed, as *abattoir* itself came to assume the taint of all that it had been designed to disavow.

Symbiotic with animal slaughter, rendering was also being reformed into an industrial, mass, yet inoffensive culture of capital over the course of the nineteenth century in Europe and North America. From the nineteenth century to the present, rendering has innovated many material technologies for scrubbing itself clean of the acrid, malodorous signs of its carnal commerce.[25] Retreating out of an urban field of vision was just one step in the reorganization of slaughter and rendering; doing everything possible to prevent the sensory revolt triggered by smell has arguably been even more critical to the aesthetic management of animal capital. As slaughter and rendering were turned into mass operations in the nineteenth and twentieth centuries, suppressing the "olftactory obtrusiveness" haunting rendering's traffic in "perishable substances" became something of an industry obsession, and *the* sensory index of its progress (Burnham, *Original* 15, 14). Modern renderers became acutely conscious of olfactory leakage from the industrial cooking of animal remains, and of a populace whose senses risked being offended by reminders of a grisly business exiled to the margins of public consciousness. The containment of smell has been integral to the inconspicuous "no-place" of public secrecy within which modern rendering has achieved invisibility.[26] The control of smell is suggestive, moreover, of the suppression of social knowledge and memory around the capitalization of animal sacrifice, facilitating public culture in "*knowing what not to know*" (Taussig, *Defacement* 2) about the "anonymous flesh" on their dinner table (Vialles 28).[27] The rendering industry has striven to spirit away all sensible traces of the historical - i.e. dying - animal, preventing the smell of animal remains from reaching the nostrils of consumer culture by promptly (and today, "continuously"[28]) converting perishable nature into perennial capital.

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[25] The National Renderers Association states that "[t]he rendering industry began as an unpleasant-smelling but essential business. While still very essential, technology has changed all this with closed cooking systems and other odor control improvements....odor [being]... the primary emission from the rendering process" ("North American Rendering: A Source of Essential, High-Quality Products" 19).

Alongside aestheticizing strategies of sensory and affective containment, the rendering industry also employs euphemism, as I began this section by noting, to divert recognition of its specific productivity under and for capitalism. When capital's clandestine traffic in animal bodies emerges, from time to time, out of the odorless and invisible "no-place" it has sought to inhabit in modernity, it takes rhetorical flight into the past by reciting, as the rendering executive in *Gates of Heaven* does, its fathomless ancestry. In his "case study of animal by-products recovery from the Neolithic period to the middle of the twentieth century" in an article in a 2000 issue of the *Journal of Industrial Ecology*, Pierre Desrochers adds academic argument to the popular euphemism of rendering as the "oldest industry in the world." Desrochers offers sweeping, transhistorical evidence of rendering as an age-old practice, and erases its specific character under the political economy and cultural logic of capital. "The oldest glue discovered so far," writes Desrochers,

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[26] The rendering industry claims to experience its invisibility as a social stigma, even while pursuing social and political anonymity through the erasure of smell. The industry's felt stigmatism is most blatantly announced in the title of a 1976 book published by the National Renderers Association, *Rendering: The Invisible Industry*.

[27] For a theorization of the public secret as a "knowing what not to know," see Taussig's *Defacement: Public Secrecy and the Labor of the Negative*, where he further defines the public secret as "*that which is generally known, but cannot be articulated*" (5).

[28] Rather than boiling down animal remains in batches, rendering technology is now "continuous." As William Prokop notes: "Continuous rendering is synonymous with continuous cooking. The raw material is fed continuously to the cooker, and the cooked material is likewise discharged at a constant rate" (*The Original Recyclers* 26). Wet rendering (releasing fat through boiling animal remains in water) has likewise been replaced by "dry rendering" (releasing fat through dehydration) (Prokop 24).

> was made by Neolithic cave dwellers living southwest of the Dead Sea some 8,000 years ago. It was made from collagen (the fibrous protein taken from animal skin, cartilage, and bone) and was used to waterproof rope baskets and containers….(32)

Desrochers proceeds to classify glue derived from animal remains in Europe and America around the turn of the twentieth century as a product of the same "human creativity" which rendered the 8,000 year-old Neolithic specimen (35). In brief, Desrochers argues that while contemporary western industrial culture claims to have improved upon wasteful economic practices of the past by assuming itself the first to achieve "closed loop" production, an industrial ecology of waste recovery has been in practice at least from the mid-eighteenth century on. For Desrochers, in fact, rendering dissolves into an ageless syntax for an economical and ecological reuse of waste in evidence from time-out-of-mind, as he collapses waste recovery practices of "the Neolithic city of Çatal Hüyük" with those of "the Roman era," and further proceeds to suggest that "the same process was also going on in North America, where Plains Indians turned bones into, among other things, fleshing tools, pipes, knives, arrowheads, shovels, splints" (32). A history rather than genealogy, Desrochers reduces profoundly disparate cultures and eras to the common sense of rendering (and displaces what I will argue is a modern logic of recycling onto a "timeless" past). Not surprisingly, when his history "progresses" to industrial cultures of the nineteenth and twentieth centuries, Desrochers places them in sweeping continuum with the industriousness of Neolithic, Roman, and Plains Indian cultures. "Market incentives," according to Desrochers, naturally advance the proverbial economism according to which *Homo sapiens* is universally moved to "create wealth out of residuals" (38).

Such an anthropological history of rendering allows a capitalist industry to mimetically identify with indigenous cultures of rendering and to dissimulate its specific economic, political, and cultural character. An animal sign mediates just such an identification with indigeneity in the collection of articles published by the NRA in *The Original Recyclers*.[29] A photo-profile of a buffalo appears on the frontispiece of the book, accompanied by these words: "The buffalo exemplifies the rendering industry because the American Plains Indian appreciated the value of utilizing the whole animal." The collection of essays in the volume – tracking technological advancements and the creation of new markets capable of absorbing the ever finer surpluses being skimmed off of animal breakdown – are insidiously framed under a totemic (and dangerously static) figure of indigeneity and use-value.[30]

In the first article in the same book - "The Rendering Industry - a Historical Perspective" - Frank Burnham further indigenizes the modern industry by placing it in lineage with native Northwest Coast cultures. In this case the totemic figure is a "rendering-like process" practiced by the Tsimshian on the Nass River in British Columbia. Burnham relays a lengthy citation from the early ethnographic account of Robert F. Heizer, who tells how the Tsimshian rendered oil or "grease" from small fish called *eulachon*, both as a foodstuff and to trade with the Tlingit. Heizer's account is saturated with paternalism for savages capable of favouring "one of the gamiest foods ever concocted" and for the "rank riches" of the eulachon trade, poking fun at its smelly "aura" (qtd. in Burnham 6-7). The eradication of smell being, as I've suggested, one of the rendering industry's most sensitive indices of progress, Heizer's ethnographic account relays "other" cultures of rendering as crude precursors to the modern industry, relegating them to a primitive past and even to a pungent pre-humanity.

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[29] The NRA, founded in 1933, represents both U.S. and Canadian renderers. Because it represents independent North American renderers – those not incorporated into or immediately adjoined to slaughter facilities owned by mega-meatpackers such as ConAgra or BP Foods Ltd. - it has come to assume something of a rogue and even outlaw identity in relation to the consolidation of rendering by these giants of animal capital. One would need to go beyond the cursory industrial genealogy I offer here to unpack the significant differences separating "classes" of rendering capital (i.e. independent renderers versus those incorporated into larger meatpackers). Suffice it to say, the rendering industry is by no means unified, and is riven by its own internal differences and antagonisms.

[30] Iconic for Pierre Desrochers, similarly, is "what the North American Plains Indians did with buffalo by-products" ("Market Processes and the Closing of 'Industrial Loops.' A Historical Reappraisal" 34).

The "potlatch grease" rendered by the Tsimshian – given away in ceremonies considered lavishly wasteful by colonial and neo-colonial governments in Canada, and first prohibited in an 1885 statute[31] – mediates a culture of exchange and a relation to material resources very different from those of mass cultures of capital. West Coast potlatch ceremonies have long been overdetermined not only by colonialisms' racist precepts but by an Euro-American ambivalence toward "waste," an ambivalence fixating upon the potlatch as both a threatening and fascinating figure of excessive expenditure.[32] The history of the "fat-splitting" industry in *The Original Recyclers* calibrates a canny balance of identity and difference in relation to the ethnographic figure of "potlatch grease" Burnham recites, at once inviting a blurring of incommensurable logics of rendering (naively identifying "fat" as the natural subject and surplus of them both, and so voiding surplus of its specific character as capital) *and* carefully distinguishing the industry's superiority over its crude precursors. The "rendering of wealth" in native West Coast cultures is both mimetically identified with and differentiated from capital's "fat-splitting industry" – enabling an ethnographic fantasy of rendering's timeless universality *and* a discriminating refusal of cultural coevalness with indigenous economies that is one of the discriminatory effects of rendering.[33]

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[31] For a history and analysis of potlatch prohibitions and fantasies in westernizing discourses, see Christopher Bracken's *Potlach Papers: A Colonial Case History* (University of Chicago Press, 1997).

[32] If a series of statutes and prohibitions of colonial and neo-colonial governments in Canada have criminalized the perceived wastefulness of West Coast potlatch economies (arguably because potlatches pose a threat to the procural, preservation, and control of natural and cultural resources necessary for the hegemony of colonial and neo-colonial capitalist economies), intellectuals such as Marcel Mauss and George Bataille have dangerously fetishized the radical laying to waste of property that they see potlatches as performing. See, for instance, Bataille's desire to articulate the potlatch as a figure of "excessive" or "*nonproductive expenditure*" ("The Notion of Expenditure" 117).

If an evocation of its indigenous roots is one means through which the rendering industry de-politicizes itself, emptying "waste" of its specifically capitalist properties is another. Yet "waste" as a specifically modern preoccupation is arguably created through industrial economies of motion geared toward the massification of capital, as well as through colonial constructions of racial hierarchies distinguishing ostensibly rational Eurocentric economies from irrational indigenous economies associated with the potlatch. It is in this Foucauldian sense that waste is *produced* as an unprecedented problem and promise for cultures of capital.

"As the kill rate rose in the nation's slaughter houses from tens to hundreds, even thousands, of animals per week," writes Burnham in relation to the U.S. rendering industry around the turn of the twentieth century, "without the renderer the problem of disposing of these inedible byproducts of the beef industry would have become one of horrendous proportions" (14). The rendering industry – evoking its etymology in the old French *rendre*, "to give back," as the NRA does in the opening citation to this section - will formulate itself as the redeemer of the animal carnage of mass capitalism. "And indeed rendering does give back," declares the NRA, riding upon a rhetoric of reciprocity which disguises the fact that rendering returns animal waste to another capitalizing round in the marketplace rather than releasing it into circuits of value outside of those circumscribed by the profit motive. Rendering refuses to let animal matter return, for instance, to perishable life in ecological circuits of decomposition where it could also nourish non-capitalist, non-anthropocentric signs of life.

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[33] In a 1999 documentary co-produced by Nimpkish Wind Productions and the National Film Board of Canada, *T'lina: the Rendering of Wealth*, 'Namgis filmmaker Barb Cranmer films the current grease-making of the Kwakwaka'wakw Nation in British Columbia. The film replays archival footage of "grease potlatches" from several early ethnographic films, footage showing West Coast natives pouring buckets of eulachon oil over one another's heads. Yet the film gives proportionally more screen time to a present-day grease potlatch, so that while it risks reinforcing an ethnography of rendering for white viewers, the film also resists the consignment of the Tsimshian's "other" culture of rendering to the primitive past by showing how it persists in the present and is coeval with capitalism's rendering industry.

Yet rendering convincingly poses as the ecological service which atones for carnivorous capital. It is through the idea that recycling offers an antidote to industrial culture's linear economies of motion (with the notion that recycling curtails capital's compulsion to unlimited consumption and production) that the even more total capitalization of nature promised by rendering escapes notice. Rather than simply *posterior* to mass production (recovering what is left over after economic activity), the rendering of animal by-products is arguably entwined in the material and discursive conditions of possibility of mass cultures of capital. It is important to counterintuitively consider the rendering of waste as a condition as well as an effect of the pace and scale of industrial capitalism. More than just mopping up after capital has made a killing, the rendering industry promises the possibility of an infinite re-subjection ("return") of nature to capital. The "industrial ecology" metaphor of the closed loop valorizes the ecological soundness of waste recovery and recycling just as the rendering industry emerges to secure a potentially infinite supply of material resources for mass commodity culture.

The rendering industry promises to redeem waste as an "unrealized abundance," a seemingly innocent insight which in fact stores the political promise of capital's potentially endless renewability by securing the material grounds of capitalism beyond the limits of nonrenewable "raw" materials (Tichi 65). As Desrochers notes, it is predominantly around the rise of industrial rendering that the idea of the material "loop" or "recycle" is put into historical circulation, a new figure of material, cultural, and political sustainability which curls linear trajectories of technological progress into the even more totalizing round figure of capital as a closed loop. Thus while inconspicously appearing to be an afterthought of capitalist production, the rendering industry radicalizes the nature of capitalist production and consumption. The secondariness encoded into waste recovery diverts recognition of the rendering industry's pivotal role in developing a new resource frontier for capitalism. In his book *By-Products in the Packing Industry* (1927), the early American economist R.A. Clemen notices that the "manufacture of by-products has turned waste into such a source of revenue that in many cases the by-products have proved more profitable per pound than the main product" (qtd. in Desrochers 39). In *Nature's Metropolis: Chicago and the Great West* (1993), William Cronon likewise notes that according to the books of Philip Armour, one of the most powerful American meatpackers toward the turn of the twentieth century, it was only as by-products that animals returned as capital:

> Armour estimated that a 1,260-pound steer purchased in Chicago for $40.95 would produce 710 pounds of dressed beef. When sold in New York at an average price of 5 and 3/8 cents per pound, this beef would earn only $38.17 – a clear loss without deducting production and transport costs. Only by selling by-products could the packers turn this losing transaction into a profitable one. (251)

Rather than salvaging an ethic of use-value for cultures of capital, as it portrays itself as doing, the rendering industry scouts out an internal frontier around which capital will be able to continue its restless drive for economic expansion, training a new gaze inward upon itself to cannibalize its own second nature. Here "second nature" literally describes the cooked wastes which are captured and returned, through the sphincters of the rendering industry, to the mass metabolisms of industrial capitalism from whence they came.

The emergence of a rendering industry signals a shift in both the material and symbolic conditions of capital, from a predominantly raw diet of so-called first nature to a supplementary supply of residual, already-manufactured nature. With the industrial consolidation of rendering, capital begins ingressing upon itself, prompted by a budding appreciation of the returns to be made from the capture and reconstitution of its own cooked residues. Contests over labour and nature at the imperial and colonial frontiers of market cultures in the nineteenth and twentieth centuries – the very narrative of the frontier as capitalism's expansion outward to exploit the receding rawness of "first natures" – thus arguably begins to be supplemented by the probing of capital into the entrails of its own industrial cultures, with a new prospecting and staking out of waste not as spare change but as undiscovered inner space. The outward-looking gaze of capital to the conquest of so-called raw colonial resources and markets begins to include, toward the turn of the twentieth century, a studied appreciation for cooked natures already at least once chewed over and spit out by industrial capital, those second, third, fourth order materials deemed "waste."

A critique of rendering's promise of "return" – and my contention that the material sustainability promised by industrial "closed loops" caches an ideological vision of capital as a biopolitical totality - suggests the need to be wary of a logic of recycling first formulated for cultures of capital around animal remains. Among the many cultural mythologies that a politics of rendering throws into question is one which surrounds recycling as a redemptive, subversive answer to capitalism (a mythology with growing currency in many contemporary green social movements). Resource and animal conservation discourses (as well as discourses of environmental reclamation) need to be examined for how they may inadvertently advance rather than antagonize the hegemony of capital. For a logic of recycling first developed around animal rendering arguably supplements the wasteful hyper-production and consumption of commodities with a sensible, "ethical" logic of saving and waste recovery, a logic which surreptitiously supports the prolongation and even infinity of capitalism.

The Production of Waste

To more specifically locate the claims I've made regarding the internal resource frontier which renderers discover for capitalism in the entrails of its own industrial metabolisms, I track back to a series of discourses training in upon waste as a new subject of attention around the middle of the nineteenth century. The "pioneer industrial ecologist" Peter Lund Simmonds (1814-1897) was one agent of the emerging interest in waste as capital *in potentia*. A journalist who worked for the British Department of Science and Art, Simmonds created a large illustrative collection on the reuse of waste products for London's Bethnal Green Museum, and supervised numerous other exhibits on the productive re-capitalization of industrial by-products.[34] In an introduction prepared for a guidebook to the animal products collection of the Bethnal Green Museum (1872), Simmonds declares: "It is one of the most important duties of manufacturing industry to find useful applications for waste materials. Dirt has been happily defined as only 'matter in a wrong place…" (qtd. in Desrochers 40). Around the same time that Ernst Haeckel coined the neologism "ecology" for "the nascent science of nature's households,"[35] Simmonds was formulating the sympathetic science of rendering as a sorting, distributing, and returning of waste materials to their proper place, i.e. the place where they regenerate as capital. In the discourse of industrial ecology pioneered by Simmonds, a capitalist economy begins to approach the totality of a natural ecosystem through the perfect mimicry of Nature promised by industrial rendering. Simmonds energetically promoted the idea that "modern industrial economies should mimic the cycling of materials in ecosystems" (Desrochers 40):

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[34] Collections of animal products and a specifically modern discourse of rendering began making a prominent appearance with the string of World Expositions following from London's Great Hyde Park Exhibition of 1851. Often included among the collected wonders of the world exhibitions were raw material galleries and animal products displays presenting evidence of "economy" as a global function of human ingenuity and material efficiency. As an 1888 guidebook published by the Crystal Palace Company notes, the permanent Crystal Palace constructed out of the 1851 exhibition building included a "Technological Museum, Including Collections of Home, Colonial, and Foreign Products," with collections "arranged under the heads of animal, vegetable, and mineral." Natural specimens collected from cultures all over the world were arranged alongside the necessities they rendered, next to "the products of the several stages to which, in most instances, they have to be submitted to render them of use to man" (*Handbook to the Fine Arts Courts and Collections, with numerous plans and illustrations*, on-line facsimile: <http://sourcebook.fsc.edu/history/crystal.html> March 2, 2005). Substituting "use" for "capital" dissimulated the ulterior motives of the Art and Industry exhibitions, which ultimately aimed at the incitement of technological innovation, the transcendence of trade barriers, and the opening up of new resources and markets for Euro-American capitalism.

> When we perceive in nature how nothing is wasted, that every substance is re-converted, and again made to do duty in a changed and beautified form, we have at least an example to stimulate us in economically applying the waste materials we make, or that lie around us in abundance….There is no waste in Nature. (Qtd. in Desrochers 40-1)

In suggesting that substances "again made to do duty" in an ecosystem are equivalent to substances returned to the industrial loop to render another generation of capital, Simmonds helps political economy to mimetically pass as natural economy by subtracting profit motives from the equation. However, in *Animal products. Their preparation, commercial uses, and value* (1875), Simmonds unmasks the motives behind the budding appreciation of waste: "As competition becomes sharper, manufacturers have to look more closely to those items which may make the slight difference between profit and loss, and convert useless products into those possessed of commercial value…" (qtd. in Desrochers 29).

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[35] Donald S. Moore, Jake Kosek, and Anand Pandian, Eds. (Introduction to *Race, Nature, and the Politics of Difference* 18). Moore, Kosek, and Pandian implicate Haeckel's science of "ecology" (coined in 1866) in constructions of race.

In the context of turn-of-the-century North America, as Cecelia Tichi discerns in *Shifting Gears: Technology, Literature, Culture in Modernist America*, the "rubric 'waste'" emerges in different ways to organize a multitude of powerful interests (66). From Thorstein Veblen's indictment of wasteful consumption in *The Theory of the Leisure Class* (1899), to conservationist calls to save wilderness and natural resources by figures such as Gifford Pinchot and Theodore Roosevelt, to Ford's excision of any inefficient use of labour or materials from his auto assembly lines, "the term 'waste' is crucial" (Tichi 57). As Tichi writes, "Ford's 'Learning from Waste' argued to the fraction of the inch and the hundredth of a cent that Ford plants maximized natural resources and manpower in order to serve the American public" (65). Most importantly, notes Tichi, the "rubric 'waste'" only made sense within the context of a discursive episteme framing the world in component parts, or pieces (66).

> Waste…presupposes a certain form of intellectual analysis of a condition or situation. The analysis must include a breaking-down, a dis-assembly of the way something works. To pronounce a situation or condition wasteful is to have first scrutinized the whole of it by breaking it down into its component parts. To call it wasteful is to have seen or devised a better, more efficient way of doing things. That can only be accomplished by an intellectual dis-assembly and re-assembly. (64)

Tichi traces the scrutinizing dis-assembly out of which "waste" would emerge as a peculiarly capitalist obsession to the time-motion studies of Eadweard Muybridge, Étienne-Jules Marey, and Thomas Eakins. A burgeoning interest in waste "owed much to the contemporary interest in the visualization of motion in space" promoted by the time-motion studies of all three, studies which helped model a trim, lithe "economy of motion" for industrial capitalism (Tichi 77).

If Simmonds de-politicized a capitalist interest in waste by likening industrial rendering to Mother Nature's biotic recycles, Marey and Muybridge more specifically targeted the efficiency of the animal body as an organic prototype for the fluid "economy of motion" industrial assembly-line production hoped to model. Marey used a "chronophotographic" gun to capture visuals of birds in flight, sequential stills which could be assembled to recreate a semblance of continuous motion – a key organic effect chased by modern technologies of capital. Using a device he called a Zoopraxiscope, Muybridge likewise reassembled his photographic stills of a galloping horse into what amounted to a technological preview of the motion picture, turning the visual breakdown of animal physiology back into a model of seemingly seamless mobility. The physiological studies of Muybridge and Marey are often cited as "protoanimations" paving the way for cinema (Lippit 22).

Time-motion studies seized not only upon the body of the animal but also upon the body of the labourer, another of industrial capitalism's primary objects of "intellectual scrutiny." It was through the scientific management principles promoted by Frederick Winslow Taylor that time-motion ideologies originating in the study of animal bodies developed ergonomic implications for an industrial culture of moving assembly lines requiring workers to perform repetitive motions with increased mechanical efficiency and speed. Emerging in the 1910s as a "patron saint of efficiency," Taylor used a stop-watch to conduct a different species of time-motion study (Tichi 56). He

> …separated seemingly simple [labourer's] tasks into their smallest components, analyzed each for excess or extraneous motion, then worked to reformulate them so precisely and economically that they required no excess mechanical motion of the worker's body or his tools. (Tichi 77)

Choosing as his subject not birds in flight but miners shoveling coal, Taylor "shot" their manual motions and zoomed in upon a series of temporal "stills" to make perceptible inefficient motions buried in each micro-motion. From there it was a matter of splicing out wasteful or extraneous movements and re-schematizing a molecularly streamlined labouring force. "Essentially Taylor saw in industry the opportunities that sequential stop-motion photographs were providing the visual experimenters Thomas Eakins, Étienne Marey, and Eadweard Muybridge in the 1880s and 1890s," writes Tichi (77). "His objective was to find the one best way to accomplish each work task, then to standardize that way" (78). Through an unprecedented subjection of bodies to microscopic performance measures, time-motion technologies and knowledges *produced* waste as a matter of reform and as a negative surplus that could be shaved off and converted into savings for the capitalist.

Taylor's principles of scientific management stimulated a biopolitical reorganization of far more than the movements of the "workingman." They informed the conservation science of Gifford Pinchot, who began to manage against waste of natural resources to ensure the material future of generations of American capital to come. Tichi retrieves polemical words of Pinchot as an example of the conservationist angle on waste: "There may be just as much waste in neglecting the development and use of certain natural resources as there is in their destruction" (qtd. in Tichi 65). In his 1908 "The Slaughter of the Trees," Emerson Hough juxtaposed photographs of forests laid to waste with images of the orderly results of the new methods of scientific forestry advocated by Pinchot, as head of the U.S. Forest Service. As for the slaughter of the animals, Upton Sinclair's *The Jungle* (1905) records not only the infamous "speeding-up" of the moving lines which Taylorism inspired, but also the pursuit of "porkmaking by applied mathematics," summed up in the popular quip: "They use everything about the hog except the squeal" (35).[36]

> No tiniest particle of organic matter was wasted in Durham's. Out of the horns of the cattle they made combs, buttons, hairpins, and imitation ivory; out of the shinbones and other

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[36] Pierre Desrochers also notes, though without Sinclair's dark irony, that "…it has long been said that 'everything but the squeal' is being used as a productive input in the meatpacking industry" ("Market Processes" 34).

> big bones they cut knife and toothbrush handles, and mouthpieces for pipes; out of the hoofs they cut hairpins and buttons, before they made the rest into glue. From such things as feet, knuckles, hide clippings, and sinews came such strange and unlikely products as gelatin, isinglass, and phosphorous, bone black, shoe blacking, and bone oil….When there was nothing else to be done with a thing, they first put it into a tank and got out of it all the tallow and grease, and then they made it into fertilizer. (*Jungle* 40)

The rise of the rendering industry can be placed in the context, then, of a complex of scrutinizing, dis-assembling, and sorting practices biopolitically registering nature and labour as ever more minute units of potential value, units no longer able go unnoticed or to evade being "again made to do duty" for capital, as Simmonds put it. That waste is a product of the time-motion technologies and economizing imperatives of modernizing capital rather than a pre-existing, eternal use-value is borne out even by the rendering history sketched in *The Original Recyclers*. For there Burnham notes that in the California cattle economy of the 1850s, when the market for animal products was almost entirely in hides and tallow, meat was considered a waste product and "abandoned on the range" for coyotes and other wild animals (9). The anecdote turns upside down not only the idea that meat constitutes an animal's universal use-value, but doxologies which hold that waste is an ontological given rather than a fickle sign factored out by market forces.

The rendering industry has for too long enjoyed an understated role in cultural studies of capitalism. Animal stock strained from the boilers of rendering plants is converted into glue, glycerin, gelatin, bone meal, soap – seemingly amorphous substances which are, however, deeply implicated in mediating both the material and symbolic hegemony of cultures of capitalism. The rendering of hides and tallow from California cattle in the 1850s is historically entangled, for instance, in soap's colonial career as a mass commodity and material signifier marketing ideas of white supremacy to the so-called dark corners of the globe.[37] The discourses and institutions of speciesism which the rendering industry helps to operate underpin the economic and cultural power of a white Eurocentric humanity over "others of whatever sort" (Wolfe, *Zoontologies* xx).

The politics of rendering cannot, however, be reduced to the politics of producing and consuming animals as meat and material by-products.[38] Rendering describes, rather, how market cultures are shot through and through with animal metaphors, as well as how they are saturated in the "mere jelly" of animal substances, to adopt enigmatic words of Marx. In his analysis of exchange-value via a close reading of Marx's *Capital*, Thomas Keenan translates Marx's description of the abstract element that is common to all commodities (of the hidden axis of equivalence which makes them exchangeable) as the "mere jelly [*Gallert*] of undifferentiated human labor" (168).[39] Marx's choice of words suggests it would be a mistake to assume that because the logic of exchange-value is abstract it cannot also be material. The viscous matter, or in Keenan's words the "ghostly residue," which Marx identifies at the abstract heart of exchangeability is evocative of the equally abstract homogeneity of the fats and gelatins extruded from the rendering machines of capital (172). Is it possible to initiate a politics of rendering by taking Marx's words literally, by reading for the substance of the sign of exchange-value in the mere fats and jellies inconspicuously mediating market life?

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[37] As Anne McClintock writes: "At the beginning of the nineteenth century, soap was a scarce and humdrum item and washing a cursory activity at best. A few decades later, the manufacture of soap had burgeoned into an imperial commerce; Victorian cleaning rituals were peddled globally as the God-given sign of Britain's evolutionary superiority, and soap was invested with magical, fetish powers" (*Imperial Leather: Race, Gender, and Sexuality in the Colonial Contest* 207).

[38] It would also be reductive to equate the praxis of a politics of rendering with vegetarianism. A theory of rendering speaks not only to the production and consumption of animals as meat, but to the countless ways animals are produced and consumed as signs and substances in cultures of capital. The impossibility of living outside the illogic of rendering resists the idea that there might be some higher moral ground from which to challenge animal capital. That said, in the context of biopower, interrogating what and how one eats is as good a place to begin as any other.

[39] See Keenan's essay "The Point is to (Ex)Change it: Reading Capital, Rhetorically" in *Fetishism as Cultural Discourse* (1993). Instead of focusing on *labour* as the element common to all commodities, Keenan makes the unusual move of focusing on the *human* as the axis of equivalence: "[B]efore endorsing or condemning some labor theory of value, we need to ask about the status not so much of labor as of the abstraction, the abstraction that is humanity" (169). The law which establishes the "commensurable magnitudes" (170) of commodities, suggests Keenan, is the abstract law of humanity. This leads him to claim that "Marxism is the critical analysis of capitalism precisely insofar as capitalism is a humanism. Humanity, the abstraction, is the *ghostly residue* that names the pragmatic necessity of likeness in exchange" (my emphasis 171-2).

"Stock" rendered from animals continues to secure the protein life of cultures of capital even as animals appreciate in value as virtual stock metaphorically mediating new relations, technologies, and markets. Capital's double stock in animal life persistently eludes politicization possibly because so much is at stake. For the biopolitical interpenetrations with substances and signs of animal life which advance capitalism's economic and cultural hegemony also betray its profound reliance upon animal resources. If animal life is violently subject to capital, capital is conversely precariously overidentified with animal signs, such that disruptions in animal capital have the potential to percuss through the biopolitical chains of market life.

Animalizing Mimesis

Michael Taussig opens *Mimesis and Alterity: A Particular History of the Senses* with the dizzying scene of "the ape aping humanity's aping" from Kafka's short story "A Report to an Academy" (xviii). Confronted by the fathomless *mise en abyme* of originals and copies in the scene of aping (not to mention the confoundment of human and animal), Taussig professes renewed wonder at the mimetic faculty. Mimesis, he writes, is "the nature that culture uses to create second nature, the faculty to copy, imitate, make models…" (xiii). To his credit, Taussig complicates the dazzling "nature" of the mimetic faculty – "if it is a faculty," he writes, "it is also a history" (xiv). Yet the invitation to approach mimesis with a sense of wonder extends throughout Taussig's book, re-sacralizing mimesis as a mystery invariably eluding capture.

I resist the temptation held out by Taussig to re-mystify aping as a quintessentially anthropological puzzle, or worse, to attribute to it a kind of innocence in "its *honest labor* [of] suturing nature to artifice…" (my emphasis xviii).[40] As with the genealogy of rendering above, I will briefly track a modern fixation with the alterity of mimesis in European theories of the first half of the twentieth century (rather than returning to the ancient discourse on mimesis initiated by Plato and Aristotle, where many western histories of mimesis begin).[41] Significantly, the anthropological rhetoric deployed to such effect by the rendering industry - annulling its specifically capitalist character by conjuring rendering as a timeless, transcultural practice - resembles a recurrent gesture running through twentieth-century discourses of mimesis. Often the very theorists who politicize the specificity of capital's mimetic power also succumb to the desire, expressed by Taussig, to marvel at mimesis, fantasizing about the resemblances linking modern mimetic technologies to a fuller, primordial mimetic faculty submerged in human prehistory.[42] Mimesis is repeatedly imagined to be as mesmerizing as the timeless personability of primates, and as unfathomable as the first stirrings of biological life in "the depths of the ocean," to use words of Michel de Certeau from *The Practice of Everyday Life* (xx). Although de Certeau is theorizing the resistant practice of *bricolage* ("making do") rather than mimesis when he invokes the watery origins of life, he allows a mimetic zoologism to diffuse the historical and political specificity of *bricolage*, sourcing the practice back to "the immemorial intelligence displayed in the tricks and imitations of plants and fishes" (xx). Just as Taussig risks reinscribing aping as a wonder rather than a sign, de Certeau risks de-historicizing and de-politicizing mimetic practices by claiming that from "the depths of the ocean to the streets of modern megalopolises, there is a continuity and permanence in these tactics" (xx).

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[40] Though he does specify its instrumentality for colonial discourses, as well as track important reversals in which western culture becomes the object of non-European representations, Taussig nevertheless invites a transhistorical, transcultural view of mimesis which risks dissolving the cultural specificity of mimetic power.

[41] For a comprehensive appraisal of theories of mimesis from Plato to Derrida, see Gunter Gebauer and Christoph Wulf's *Mimesis: Culture, Art, Society* (University of California Press, 1995).

[42] To his credit, Taussig does suggest that "the whole anthropological trip starts to eviscerate" when the colonial direction of mimetic power is reversed, that is, when the Western subject finds him/herself being fashioned in the mimetic object – the "very mimicry corrodes the alterity by which my science is nourished. For now I too am part of the object of study" (8).

The modern discourse of mimesis which I aim to throw into question, then, consists of rhetorical motions which, overtly or covertly, classify it as an ageless practice continuous with the biological mimicry of animals, fish, and insects. Invoked under the sign of innocent biological life, mimesis will be viewed as a marvel of natural history, a faculty transcending its political organization and mobilization. The desire to read mimesis as a force of natural history becomes especially acute in the early part of the twentieth century, when a host of technological media – photography, film, radio, advertising – begin provoking a crisis of mimesis through their unprecedented power to reproduce mass cultures of capitalism.

Taussig's invitation to cede to the animal charm and biological irrepressibility of mimesis has persuasive precedents in writings from this period. Walter Benjamin, cited heavily by Taussig, hints in his 1930s writings that a zoomorphic faculty for forging resemblances and making copies can never be wholly denatured, not even through the instrumentalization of mimesis by the mass media of capitalism. In a famous passage describing the loss of aura in "The Work of Art in the Age of Mechanical Reproduction" (1936) – a loss which for Benjamin is symptomatic of capitalism's momentous historic reduction of mimesis to mere technological reproductions of likeness – he writes that "to pry an object from its shell" is "to destroy its aura" (*Illuminations* 225). Benjamin's trope of a mollusk existence pried by technologies of mechanical reproduction from its submerged home implies that the mimetic relation which capitalism historically threatens to denature archives the primordial origins of life itself. Yet if capitalism endangers the primal nature of mimesis by technologically harnessing it to mass commodity reproduction (reducing the alterity of mimesis to the reifying order of the mimetological, to use a distinction later theorized by Derrida[43]), Benjamin invests hope in mimesis as an irrepressible biological inheritance destined to ultimately survive and subvert its instrumentality for anthropocentric capital. If on the one hand Benjamin's work catches sight of mimesis as a political "history" flashing up in a moment of crisis provoked by the mass media of commodity capitalism, it is also marked by a proclivity for poeticizing mimesis as a natural faculty, nostalgically linking the twentieth century to a "time immemorial" in which self and other, human and nonhuman, animate and inanimate, were linked by relations of mimetic resemblance rather than relations of abstract equivalence ("On the Mimetic Faculty" 721). In various short writings – "Doctrine of the Similar," "On the Mimetic Faculty," and "The Lamp," among others – Benjamin risks undoing the politicization of technological media (of cinema, in particular) advanced in "The Work of Art in the Age of Mechanical Reproduction," by pondering the seductive lure of mimesis as an intrinsic "compulsion" threading back through an almost Lamarckian natural history. "The gift which we possess of seeing similarity," he writes, "is nothing but a weak rudiment of the formerly powerful compulsion to become similar and also to behave mimetically" ("Doctrine" 67).

Benjamin's writings on mimesis reflect his close association with Adorno and Horkheimer (and vice versa), who were similarly fascinated with the "archaic character of mimesis," in the words of Gunter Gebauer and Christoph Wulf (281). Adorno, in particular, formulated mimesis as a "nonconceptual affinity" between self and other, an immediate, surrendering relation of culture and nature (*Aesthetic Theory* 54). While profoundly aware of capitalism's ability to instrumentalize mimesis to a degree which cast serious doubt upon its subversive potential, Adorno, like Benjamin, nevertheless held out hope for its ultimate non-instrumentality for power, that is, hope for the alterity of mimesis. If not exactly the compulsive assimilation to animals and things which Benjamin explored, what typifies the alterity of mimesis for Adorno is a "living experience" glimpsed in its original, enchanted state in so-called primitive, pre-capitalist cultures, for which nature signifies an otherness evading objectification and conceptual mastery (*Aesthetic* 175). For Adorno, only aesthetic experience can restore the vitality of such a mimetic immediacy of culture and nature. Though always careful to trace culture's complex "dialectic of rationality and mimesis" (*Aesthetic* 54) rather than to cast the two as opposites (as well as understanding mimesis, in Taussig's words, to be "a repressed presence not so much erased by Enlightenment science and practice as distorted and used as hidden force" [*Mimesis* 45]), the discourse of mimesis developed by the Frankfurt School nevertheless betrays its entanglements in an ethnographic fantasy of the "Other" of technological modernity. It is tinged, in other words, with the paternalistic aesthetics of a Europe sick of its own technological sophistication and seeking to revitalize itself through contemplation and collection of the still "pure" mimetic artifacts and practices of "primitive" cultures. Intellectuals such as Adorno and Horkheimer, seeking a way out of the claustrophobic advance of European fascism, on the one side, and the reifying powers of commodity culture on the other, looked to mimesis as a repository of pre-discursive, or

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[43] Martin Jay provides a helpful definition of mimetology as opposed to mimesis: "What the poststructuralists call mimetology involves subordinating mimesis to a deadening logic of sameness or sublation" ("Mimesis and Mimetology: Adorno and Lacoue-Labarthe" 46). By contrast, many poststructuralists understand mimesis as "an infinite oscillation between original and copy…[the] hyperbological antidote to mimetology" (46).

"primordial reason" (Jay, "Mimesis and Mimetology…" 33).[44] Yet the unacknowledged geopolitical coordinates underpinning the notion of mimetic alterity they fixed upon as an antidote to technological modernity suggests that *especially* when it is invoked under the sign of nature, mimesis is a cultural and political sign.

Roger Caillois's "Mimicry and Legendary Psychasthenia" (1938) was part of the efflorescence of mimetic theories spawned under the double specters of fascism and capitalism during this period.[45] One of the founders of the Collège de Sociologie (a Parisian avant-garde group including Georges Bataille and Michel Leiris), Caillois turned to the study of mimetic insects to carve out a fascinating theory of mimesis as an animal "pathology" (17). Insects mimicking the appearance of leaves, twigs, or stones revealed, for Caillois, a vertiginous "luxury" or excess leading animate life to approximate inanimate life, stasis, and even death. He christened this animal death wish "*le mimetisme*" (17). Caillois's elaboration of animal mimetism, like the "mimetic impulse" theorized by Adorno and the "compulsion to become similar" sketched by Benjamin, argues for "a deeply internalized tendency in all living things to deliver themselves up to their surroundings" (Gebauer and Wulf, 286). The playing dead of insects and animals signals not a survival mechanism protecting the organism against predation, Caillois contends, but a perverse death drive which he formulates as a "temptation by space" (28).[46] *Le mimetisme* lures creatures into losing their distinct outlines and will-to-life by provoking an "*assimilation to the surroundings*" (27).

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[44] As Martin Jay notes, "mimesis, as Adorno develops it, is not to be understood as the simple opposite of reason, as it sometimes has been. It is closer to what Habermas once called a 'placeholder' for a 'primordial reason,' which, however, cannot be satisfactorily theorized without betraying its preconceptual status" ("Mimesis and Mimetology: Adorno and Lacoue-Labarthe" 33).

[45] Denis Hollier notes that "[i]n French psychiatric language of the time, psychasthenia meant – as its etymology suggests – a drop in the level of psychic energy….Mimesis is [thus] described in terms of energy, along thermodynamic lines" ("Mimesis and Castration" 11).

[46] Against the rationale that the mimetism of insects functions as a protection against predation, Caillois argues that "one finds many remains of mimetic insects in the stomachs of predators," leading him to suggest that "[w]e are thus dealing with a luxury and even a dangerous luxury, for there are cases in which mimicry causes the creature to go from bad to worse: geometer-moth caterpillars simulate shoots of shrubbery so well that gardeners cut them with their pruning shears" (25).

"What mimicry achieves morphologically in certain animal species," elaborates Caillois, schizophrenia unleashes in human subjects – a loss of subjectivity and "*depersonalization by assimilation to space*" (30). Caillois's formulation of the relationship between mimesis and schizophrenia gets rearticulated, with a difference, in the poststructuralist philosophy of Deleuze and Guattari, who elaborate becoming-animal as an affective compulsion and involuntary "desubjectification" (*Thousand Plateaus* 270). "Becomings" radically challenge the reduction of mimesis to relations of imitation, since in imitation nature and culture, original and copy, retain their binary distinction.[47] In first theorizing mimesis in terms of a pathological becoming exceeding imitation, Caillois in effect removes mimesis from a field of social power and returns it to the secret biological life of an organism subject to involuntary, inexorable drives.

As Denis Hollier notes, moreover, "Caillois does not find it worthwhile to remind us that [an animal] can only play dead because it is alive. His entire analysis proceeds as if playing dead and being dead were one and the same" ("Mimesis and Castration" 13). The "vital difference" which Caillois overlooks also marks *the* difference, arguably, between aesthetic theories of mimesis and a politics of rendering (Hollier 13). If such an aesthetic indifference to the "vital difference" is overlooked by Caillois, how much more will commodifying cultures of capital collapse the material difference between death as a mimetic feint and death as the fatal outcome of capitalism's reifying relations to animal life? In the service of capital, mimetic power infuses commodities with a semblance of vital life while reducing animals to the thinglike and administered; cultures of capital indeed powerfully render "the vital difference" epiphenomenal by converting life into a mimetic *effect* which can be simulated by objects as much as by animals. Caillois's formulation of mimetism as a death instinct compelling animate life to return to an inanimate state – his suggestion that a "return to an earlier state, seems here to be the goal of all life" (Gebauer and Wulf, 282) – itself can be read as a displacement of the pathological violence of capital's cultural logic onto a regressive nature. Caillois's discourse of animal mimetism, that is, attributes to biological life what is in effect capitalism's historical death wish upon animals, its reifying drive to convert all nature into capital.

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[47] Importantly, as opposed to Deleuze and Guattari's poststructuralist valorization of "becomings" and schizophrenia, Hollier suggests that "Caillois's description of mimetic behavior is…no praise of psychasthenia; rather, it begins with an argument for distinction" (11).

Under the rubric of a species of "immemorial intelligence" that is in essence the same, whether it guides a tactical sense of marine life in "the depths of the ocean" or human life on "the streets of the modern megalopolises," the power of mimesis is repeatedly de-politicized by collapsing it into signs of animal mimicry and mimetism.[48] In the case studies which follow, I resist a susceptibility to wonder at the nature of the mimetic faculty by focusing on its political character, its power to reproduce the specific "second natures" (i.e. cultures) of capital. If there is cause to wonder, it is at what might be at stake in the desire, expressed most recently and seductively by Taussig, to recuperate the alterity of mimesis, to dream of a faculty which transcends its organized control and productivity in the service of capital.

Automobility, Industrial Mobility, Telemobility

A heterogeneous array of cultural texts and productions come under critique in the case studies which follow: advertising and film texts, industrial tours and technologies, traffics in animal tropes as well as traffics in "mere jelly." They come up for analysis as I theorize, more broadly, the relation between animal capital and the mimetic rendering of North American cultures of technological mobility (whose conditions and effects are, however, global). The recurring focus on technologies of mobility which threads through my dissertation – automobiles, moving pictures, mobile phones – is hinted at in its title.

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[48] I reiterate the words of Michel de Certeau because they condense the rubric under which mimesis is imagined as an archaic natural inheritance. If de Certeau is in this sense implicated in the de-politicization of mimesis, his theory of *bricolage* as tactical resistance to colonial and capitalist hegemonies is by no means reducible to this moment.

In the first chapter, "Automobility," I bring contradictory material conditions and aesthetic effects of Fordist cultures of capitalism into antagonistic proximity by tracking how automobiles and moving pictures are conditional upon a biopolitical production of the substance as well as sign of animal life. "Automobility" names a cluster of material relations and mimetic effects through which three seemingly unrelated technological moving lines of Fordism historically intersect: the animal disassembly line in the vertical abattoir, the auto-assembly line, and the cinematic reel. I theorize the complicit metaphorical and material economies linking these three moving lines to pressure capital's duplicit stock in animal life into view. I also examine points of overlap in the sign of nature and the sign of labour produced through the mimetics of automobility. To resist consigning automobility to a distinct historical chapter of Fordist capitalism that has been ostensibly closed with the coming of post-Fordist technologies, in the latter half of this case study I closely analyze two contemporary advertisements for the Saturn *Vue* Sport Utility Vehicle, unraveling the ways "automobility" continues to mimetically coordinate with a post-Fordist environment.

My case study in telecommunications capital, "Telemobility," would seem to fit, chronologically speaking, after "Automobility." However, I insert a study in "Industrial Mobility" between the two for several strategic reasons. Firstly, I want to make some effort, however contrived, to interrupt the teleological sense according to which telemobility seems to historically succeed automobility, leaving industrial capitalism in the dustbin of history. By inserting "Industrial Mobility" between the two, as the hinge upon which they are both contingent, I implicate Fordist and post-Fordist cultures of capital in the on-going pathologies of industrial rendering. By looking at mineral capital in "Industrial Mobility" – specifically, at the massive open-pit mining of oil sands in Canada's north – I also hope to show that the illogic of rendering is not exclusive to animals, but impinges upon other natures. In *Animal to Edible*, Vialles discerns references to animal, vegetable, and mineral natures in the word *abattre*, the root of abattoir. "The general meaning of *abattre* is 'to cause to fall' or 'to bring down that which is standing'," writes Vialles.

> It is primarily a term in forestry, where it refers to felling; subsequently it came to be used in the mineral world, where it denoted the action of detaching material from the walls of a mine tunnel….With reference to the vocabulary of forestry, it suggests an analogy between the slaughter of animals and the felling of a tree, both of which involve bringing into a recumbent position something that was standing erect. (23)

Such a logic of felling is still at work in the title of Emerson Hough's 1908 article, "The Slaughter of the Trees" (an article which, as I've mentioned, valorizes the scientific forestry methods promoted by Gifford Pinchot and the conservation management of resources). A discourse of felling informs not only the harvesting of animal, but also of mineral and arboreal capital, and is deeply implicated in a politics of rendering. Nevertheless, the politics of rendering earth's geological deposits is capable of mobilizing far less interest, I suspect, than the politics of rendering animals. Precisely because animal signs have been so successfully deployed as affective technologies (to the point that animal rights lobbyists and anti-fur campaigners play into the hands of dominant culture when they seek to mobilize opposition by exciting emotional identifications with animal life), it is important that a politics of rendering be careful about its own potential to excite affective currencies of capital by doting on animal signs. That said, as becomes clear in "Industrial Mobility," it is impossible to critique capital's mimetic production of affect without addressing the nodal function of animal signs in that production. Wherever affect is produced to de-politicize or naturalize the nature of capital there stands, it seems, an animal sign. This is true of the tour of the oil sands which I "take" in "Industrial Mobility," a tour book-ended by animal signs. The sign welcoming tour-goers to a mining mega-project of devastating proportions is a gigantic sculpture of wood bison, which as I argue functions as a form of mascotry. At the last stop on the tour, visitors disembark from a bus to view a live herd of wood bison grazing on a reclaimed mine site. The sign of the animal is thus strategically positioned to steal attention away from a ravaged terrain which would seem to unavoidably confront tour-goers with the pathological violence of "felling" mineral nature, reducing it to the "mere jelly" of crude oil. The sign of the wood bison not only affectively seals over the irreparable nature of oil sands capital, it serves to naturalize resource capitalism's neo-colonial relationship to Aboriginal lands and labour.

It is with the massive material gouge of the oil sands in sight, then, that I turn to "Telemobility" to theorize the politics of deploying animal signs to aestheticize telecommunication as a species of "painless transmission" (Debray 46). Again, I resist the easy equation of what I term "telemobility" and advanced capitalism. Just as I seek to show that "automobility" and "industrial mobility" are constellations of mimetic power exceeding periodizations which would contain their cultural persistency, so in this case study I begin by locating "telemobility" in the nascency rather than advanced stages of modern capitalism. I discern a discourse of telemobility in Luigi Galvani's early "monstrations" (a term which I borrow from the film theory of André Gaudreault) of "animal electricity" in the 1780s. Animal electricity is not just the name Galvani gave to the lifelike spasms he induced in dead frog legs, but a trope for the wireless, long-distance communication with "animal spirits" he claimed to conduct through an invisible nervous fluid in animal bodies. Tropes of animal electricity resurge at subsequent moments in the technological imaginary of the west to configure powerful new electric and electronic media. I trace a pathological discourse of telecommunication in Thomas Edison's filmed electrocution of an elephant in 1903. Edison stages an experiment in "painless transmission" which exposes the pathological economies of electrical and cinematic communication even as it serves to publicly promote electrocution as a sympathetic technology of painless death proper to "humane" methods of governance. I take up telemobility discourse as it is calibrated in "late" capitalism, finally, by interrogating the advertising archive – stocked with animals - of Telus Mobility Inc., Canada's second largest telecommunications corporation. The popular advertisements of Telus mine the affective field of animal signs. At stake is an illogic of rendering which allows for the contradictions of using live animal models to configure telecommunication as an immaterial, spectral exchange. Through the monkey signs which feature regularly in Telus ads, I pressure a discourse of telemobility to divulge the neo-colonial relations of race, nature, and labour supporting telecommunications capital. To that end, I confront the de-materialized image of communicative exchange advanced in Telus's animal ads with the geopolitics of coltan mining in the Congo, a semi-precious and highly conductive mineral used in telecommunications and electronics gear such as mobile phones and PlayStations.

In the Postscript, I examine capitalism's practices of animal cannibalism, which recently erupted into crisis in North America upon the diagnosis of several Canadian cattle with Bovine Spongiform Encephalopathy, or mad cow disease. As disease incubators threatening to expose capitalisms' harrowing protein recycles, animals return in excess of the anticipated returns of rendering. Yet rather than compelling alternatives to the rule of capital, the mad cow crisis risks serving, like other crises in the history of capitalism, as an emergency around which discourses and institutions of animal capital are re-naturalized to further tighten biopolitical hegemonies. At stake is whether or not the pathological excess signaled by outbreaks of mad cow disease can be seized as an opening within the double bind which rendering describes, and if so, an opening for what?

Automobility

Introduction

The birth of Fordism is routinely sourced to the year 1913, when Henry Ford "set in motion the first example of assembly-line production in Dearborn, Michigan" (David Harvey, *The Condition of Postmodernity* 28).[1] In reciting Ford's Highland Park plant in Dearborn as North America's "first example of assembly-line production," the moving lines which the plant in fact mimetically modeled are quietly displaced from historical consciousness. For rarely recalled or interrogated is the fact that Ford modeled Highland Park's auto-assembly line upon moving lines operating at least since the 1850s in the vertical abattoirs of Cincinnati and Chicago, with deadly efficiency and to deadly effect.[2] Ford, deeply impressed by a tour he took of a Chicago slaughterhouse - particularly with the speed of the moving overhead chains and hooks which kept animal "material" flowing continuously past labourers consigned to stationary and hyper-repetitive piecework - devised a similar system of moving lines for Dearborn, but with a crucial mimetic twist: his automated lines sped the assembly of a machine body rather than the dis-assembly of an animal body.[3] The auto-assembly line, so often taken as metonymic of mass modernity, is thus mimetically premised upon the ulterior logistics of mass animal disassembly which it technologically replicates and advantageously forgets in a telling moment of historical amnesia. I retrieve Ford's visit to the slaughterhouse as a striking figure of the mimetic relation of copy *and* contact linking two seemingly unrelated moving lines, and as a charged moment capable of triggering historical recall of the complicity between mobile capital and animal rendering.

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[1] James Flink also claims that "the Ford Motor Company innovated modern mass-production techniques at its now Highland Park plant" (*The Automobile Age* 37).

[2] "It is uncertain where or when the overhead assembly line originated," writes Louise Carroll Wade in *Chicago's Pride; The Stockyards, Packingtown, and Environs in the Nineteenth Century*, "but many Cincinnati and Chicago plants had them by the late 1850s" (62).

[3] It is strange to find the rarely noted relation between the two lines being presented as a helpful analogy by Canada's federal Department of Agriculture. In one of its "Bi-Weekly Bulletins" entitled "Canada's Major Red Meat Packing Industries – Beef and Pork," the Department notes: "The modern meat plant operates in a fashion similar to Henry Ford's original production of Model T Fords, with mass production of identical products to create economies of scale; however, the assembly of automobiles is a building-up process, whereas the meat packer performs a breaking-down process" (<http://www.agri.gc.ca> March 2002).

What changes when Fordism is revisited as a complex of mimetic relations, when Highland Park is viewed as a copy of a prior animal dis-assembly line rather than as the original template of mass production, and when capital is read within the more diffuse outlines of an abysmal logic of rendering which precedes and exceeds Fordism proper? How might the mass cultures and mass media associated with Fordism need to be revised in view of their unexamined premises in the recessive and excessive politics of animal rendering? In this chapter, I probe for signs of animal capital in half-sedimented histories of Fordism in an effort to de-familiarize the compacts of mass production and consumption, the methods of industrial management (with all of their Taylorizing prods and prompts), and the general economy of power "Fordism" has come to popularly signify. The familiar view of Fordism changes in every aspect when confronted with a material politics of animal capital it has largely left unexamined and even helped to repress. For animals are rarely, if ever, politicized as pivotal, *prototypical*, subjects of Fordism.

Tracking how the sign of animal life is put into contradictory yet inconspicuous circulation as both a carnal and metaphorical currency implicates Fordism in an illogic of rendering overlooked by a long line of critiques which take the human, in the privileged figure of the labourer, to be the focal historical subject of industrial capitalism. Even Antonio Gramsci's famous neologism "Fordism" – which brings not only the social production of "a new type of worker and of man" into political focus, but shifting nexuses of social persuasion and force beyond those managing class (*Prison Notebooks* 235) – leaves a metaphorical and material production of animals in place as the ulterior sense of Fordism. Gramsci interrogates industrialism's "victory over man's animality" in a passage in his prison notebooks entitled "'Animality' and industrialism," yet "man" remains the primary subject whose nature is physically and ideologically at stake, while the fashioning of modern capitalism's animal subjects is paradoxically displaced from the sign and politics of "animality."

The animal sign in one of Gramsci's objects of critique – Taylor's depiction of the worker as an "intelligent gorilla" (*Principles of Scientific Management* 40) – thus remains unchallenged. The simian encoded within the Taylorist science of labour organizes systems of scientific management around a figure of animal mimesis, that is, around the figure of a gorilla predisposed to mass production as a species of mechanical aping.[4] In his prison notebooks, Gramsci seizes upon what he calls Taylor's "trained gorilla" for the reductive figure of manual labour it poses, but not for the figure of animal life it presupposes.[5] The figure of the animal as a mimetic automaton ("trained gorilla") capable of copying the same simple physical task over and over again is inadvertently accepted in Gramsci's critique of an American industrialism which strips its labour of skill and intellectual agency, reducing it to the brute repetition of mechanical motions.[6] Entwined in the covert figure of the mechanical animal, furthermore, is a figure of mimesis; the animal nature of mimesis and mimetic nature of animals remains a pivotal assumption supporting modern capitalism's social and economic projects. If industrial capitalism's "new human type" is confronted in critical terminologies of Fordism, its underlying production of animal signs and substances remains largely unproblematized, even unconscious (Gramsci 169).

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[4] Taylor proposes to improve the inefficient motions of pig-iron handlers in Pennsylvania steel mills, stating: "This work is so crude and elementary in its nature that the writer firmly believes that it would be possible to train an intelligent gorilla so as to become a more efficient pig-iron handler than any man can be" (*The Principles of Scientific Management* 40).

[5] The sign of the monkey is at the same time racially overdetermined (as I examine in detail my last chapter on "Telemobility"), suggesting that Taylorism also perpetuated biological discourses of race.

[6] Gramsci takes up Taylor's comment on the "intelligent gorilla" as the most condensed expression of the effort "to develop the worker's mechanical side to the maximum, to sever the old psychophysical nexus of skilled professional work in which the intelligence, initiative, and imagination were required to play some role, and thus to reduce the operations of production solely to the physical aspect" (*Prison Notebooks* editors' note 214, 216).

Bill Brown suggests that "the task…of producing the history which lingers within neglected images, institutions, and objects" is the task of producing a "material unconscious" (*Material Unconscious* 5). Brown derives his formulation of the material unconscious from Walter Benjamin's notion of the mimetic "shock" which illuminates history not as a past chronology of impenetrable events or frozen marks in time, but as unsettled fragments still up for revision, thawing and heaving up different debris under the messianic heat of a backward glance which views the past as a series of open rather than reified accounts. Benjamin holds that alternate, undeveloped histories hang as suspended, sub-imprints of photography and film, awaiting future "developers" who might make them materialize (*Material* 13-14).

In place of the "photographic metaphor" of the Benjaminian optical unconscious, Brown turns to the literary "plate" as a teeming site of as yet undeveloped, potential material histories (14). For Brown, the "referential excess" of ostensibly negligent remarks in literary texts constitutes an unactivated link to "the material everyday," to a repository of "ephemera that have yet to attain historicity" (5). Flaubert's seemingly superfluous mention of a barometer in his description of Mme. Aubain's parlor in "Un coeur simple," for instance, constitutes more than a move to generate a mimetic reality effect[7]; in Brown's reading, it is where history unintentionally leaves a sensible trace in the text, where the text retains signs of a contiguity or brush with material history beyond what it consciously sought to capture through its mimetic designs (17). Brown argues, furthermore, that the material unconscious is an historical negative that requires "active development" to appear (14). Only when a literary "plate" is bathed in the catalytic solution of an active reading - in a "certain kind of attention, concentration, or inhabitation that is unwilling to understand the seemingly inadvertent as genuinely unmotivated" (14) – do the ostensibly incidental imprints or mimetic excesses in literary texts release submerged material histories which otherwise would fail to ripple the surface of a hegemonic historical consciousness.

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[7] As Brown notes, "the (structuralist) Barthes of 'The Reality Effect' (1968)" reads Flaubert's barometer "as a superfluous notation, a diegetically and symbolically nonfunctional detail of the sort that realism deploys in the effort not to denote a specific materiality but to…effect the realist illusion" (*The Material Unconscious; American Amusement, Stephen Crane, and the Economics of Play* 15).

I approach Fordism as a tangle of unresolved and often still-unconscious historical relations which can be "developed," in Brown's sense, to trouble congealing histories of capitalism. Looking back upon seemingly unrelated images and institutions heaving in the historical mound of turn-of-the-century North America, I reopen the complex relations of modern capital, resisting consolidation of Fordism as a fixed historical image and provoking a reckoning with its unsettled accounts. Against the perception that Fordism represents a clearly delineable and now defunct stage of modern capitalism, "automobility" names a network of mimetic power whose productivity for cultures of capital is by no means finished, and which exceeds containment within discrete "Fordist" or "post-Fordist" eras. The discursive network of automobility emerges, but doesn't end, with three early time-motion economies: animal dis-assembly, motion picture production, and automotive assembly. Automobility is productive of aesthetic effects of technological mobility, effects specifically promoted by cars and cinema, which come to mimetic life by imitating signs of organic animal motion. Yet it also consists in unacknowledged material transfers across these three time-motion economies of capital, sites where mimetic power involves a literal yet non-transparent traffic in animal substances, and a physical share in animal life. Automobility institutes talismanic tropes of animal life *and* drives the material displacement and death of historical animals, a productive contradiction for cultures of capital so long as it is mimetically managed as a relation of supplementarity rather than antagonism, according to the double logic of rendering I've introduced. Automobility thus names an under-theorized, and unfinished, traffic across three moving lines of capital, a metaphorical traffic in tropes of animal life subtended by a material traffic in animal remains.

Unlike Benjamin and Brown, I begin not with the literary or visual excess unwittingly captured on a photographic or literary "plate," but rather worm into the viscosity of the mimetic medium itself – in this chapter, it will be into the literal composition of photographic and film stocks – to develop the animal negatives encrypted in capital's mass media, and to bring the rendered material of automobility to historicity. The rendered material of automobility's moving lines archives capital's "unconscious" death wish upon animal life, one that is radically yet productively at odds with the sign of life "consciously" articulated through the animal tropes so aesthetically predominant in time-motion discourses of automobility (especially in the animal studies of Eadweard Muybridge and Étienne-Jules Marey).

In what follows, I will amplify seemingly incidental linkages across the signs and spaces of mass animal dis-assembly, automotive assembly, and film stock. I've already staked out Ford's visit to a Chicago meatpacking plant as one incident around which the relations of Fordism can be reopened. To track how a double logic of rendering precedes and exceeds Fordism as a discrete model (i.e. persists in a post-Fordist era of capital), I track the relations of Fordism into a case study of the Saturn

Corporation and a reading of 2002 advertisements for the Saturn *Vue* Sport Utility Vehicle. Before engaging the Saturn ads, however, I trace two earlier industrial discourses productive of the network of automobility: mass animal slaughter in the vertical abattoirs of the Chicago stockyards, and George Eastman's production of photographic and film stocks. I begin by theorizing the aesthetic economy of the slaughterhouse tour. I then delve into the materiality of film stock production to develop the non-transparent yet pivotal role that photographic gelatin[8] – derived from the waste of industrial slaughter – plays in the development of mass visual culture. Gelatin is among those seemingly irrelevant but in fact loaded points of entry into the material unconscious of culture; in my reading, it marks a political "vanishing point" where moving images are materially contiguous with mass animal dis-assembly, in contradiction with cinema's technological mimicry of animal movement and its framing semiotic of "animation."[9] To take seriously such seemingly arbitrary points of contiguity between slaughter and "automobility" as Ford's visit to a packinghouse, or the invisible presence of animal gelatin in photographic and film stock, demands that one indeed be "*unwilling to understand the seemingly inadvertent as genuinely unmotivated*" (my emphasis, Brown 14).

Because animals have been identified with the unconscious insofar as it is conceived psychoanalytically (by Freud, in particular) as a sub-terrain of primordial drives pacing in "an unaging and undiminishing state" (Lippit 104), it is especially important to reiterate Brown's formulation of the unconscious as an alternative *material history*. The animal negatives which I will develop are material histories, rather than timeless psycho-semiotic figures. As Brown puts it, one must "understand the unconscious as material history and history as the unconscious, as the necessarily repressed that can be rendered visible in sites of contradiction or incomplete elision" (5). Reformulating the unconscious as a terrain of recessive and excessive material history becomes paramount when it is a matter of developing genealogies for animal subjects lavishly accorded mythological and rhetorical existence, yet strictly denied historical and political status. Against an understanding of animals as "perpetual motion machines" that "live *unhistorically*," I read the material unconscious of capitalist modernity as the denied, disavowed historicity of animals and animal rendering (Lippit 188).[10]

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[8] Gelatin will sometimes appear with an "e" and sometimes not over the course of this chapter, since its spelling is inconsistent in the texts I refer to.

[9] Here I use "vanishing point" to name the point at which animal material is rendered perfectly non-transparent to visual culture, as well as the moment in animals' industrial treatment at which, in Noëlie Vialles' words, they become just "a substance to be processed" (44). In his early description of a tour of a slaughterhouse, Frederick Law Olmsted uses the words "vanishing point" to name this identical moment: "We entered an immense low-ceiled room and followed a vista of dead swine, upon their backs, their paws stretched mutely toward heaven. Walking down to the vanishing point, we found there a sort of human chopping-machine where the hogs were converted into commercial pork" (qtd. in Cronon, *Nature's Metropolis: Chicago and the Great West* 228). The "vanishing point" also references a perspectival effect in the visual arts, first mastered in the Renaissance, and serving to ideologically buttress humanist Europe's claims of cultural superiority on the grounds of its mimetic mastery of realistic rendition.

Touring the Vertical Abattoir: Slaughter's Cinematic Disposition

In view of the abysmal logic of rendering around which I pursue undeveloped material histories and relations of automobility culture, I set out to unravel points of metaphorical and material traffic across three moving lines of capital: animal dis-assembly, automobiles, and moving pictures. While I implicate cars' and films' mimetic effects of organic motion and animation in the historical displacement and mass breakdown of animals, I begin here by implicating, conversely, the material logistics of animal dis-assembly in a logic of aesthetic consumption normally identified with cultures of windshield and screen. I suggest that an aesthetic disposition associated with cinema, in particular, was already at work contouring the animal dis-assembly lines of Chicago's stockyards, where animals were processed not just for metabolic markets, but for aesthetic consumption as well. In other words, the vertical abattoir mobilized a new kind of aesthetic as well as carnal capital according to the double logic of rendering, such that in the vertical abattoir can be discerned not only the logistical prototype of cars' and films' material production (assembly, suture), but also the blueprint for a new order of aesthetic experience.

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[10] The claim that "the animal lives *unhistorically*" is Nietzsche's (qtd. in Lippit, *Electric Animal: Toward A Rhetoric of Wildlife* 68).

Animals hoisted onto moving overhead tracks and sped down the dis-assembly line constitute, I contend, one of North America's first "moving pictures." Such a contention requires that, like Jonathan Crary or Geoffrey Batchen, one excavate for the discursive rather than empirical conditions of photographic and cinematic culture, for the "assemblage" of percolating knowledges and desires which intersect with material practices and technological equipment to put images into motion.[11] *This* moving picture was being aesthetically consumed in guided tours of Chicago's Packingtown at the same time as Eadweard Muybridge's Zoopraxiscope, a device which put still photographs into motion under the zoo-sign of animal life, was beginning to capture attention as a novel mimetic machine bringing Americans closer to the attainment of mass motion picture technologies.

When Chicago hosted the Columbian world exposition in 1893, Muybridge's Zoopraxiscope was among its many exhibits. It was displayed in the exposition's White City alongside other cutting-edge mimetic technologies such as Eastman's portable Kodak camera, flexible film, and Edison's Kinetiscope motion picture camera, all promising spontaneous visual capture of life-in-motion (Brown, *Material*

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[11] In *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*, Crary suggests that "any optical apparatus," in this instance the camera obscura, is "what Gilles Deleuze would call an *assemblage*....a site at which a discursive formation intersects with material practices" (31). In *Each Wild Idea: Writing, Photography, History*, Batchen takes a similarly non-empirical approach by locating the conditions of photography in a framework of "discursive desire" rather than in its technological determinations (5).

239). Visitors were apt to stray from the attractions of the White City, however, and venture into the bloody outer attraction of the neighbouring "bovine city," where an unprecedented technology of animal death – the moving dis-assembly line - was also on display (Wade, *Chicago's Pride* 32). As Louise Carroll Wade notes, over one million people paid a visit to the bovine city, or Chicago stockyards, in 1893, the year of the World's Columbian Exposition (xiv).[12] "Guided tours of the yards and packinghouses were 'as popular as a ride in the Ferris wheel and far more interesting'" in the opinion of many visitors (Wade xiv). Across the Chicago river from the Exposition's White City, in dark Packingtown, lay the spectacle of animal dis-assembly, the material "negative" of the mimetic signs of life promised by the new technological media on the other side. The mimetic media were, for a brief historical instant, dangerously congruent with their material unconscious.[13]

In the time-motion efficiencies on display in the vertical abattoirs of Packingtown, cattle were forced to walk up chutes to an elevated landing, so that the gravitational pull of their own bodies would propel them down the dis-assembly line. Hogs, by contrast, were simply seized by their hind legs and moved along an overhead rail. In the description of Durham and Company's dis-assembly line in Upton Sinclair's *The Jungle* (1905), provisions made in the architecture of mass slaughter for its recreational viewing make a significant appearance. The slaughter of cattle could be viewed "in one great room, like a circus amphitheater, with a gallery for all visitors running over the center" (38). As for "the hog's progress" (37), it could be viewed in

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[12] Writes Wade: "In 1875, when the stockyard was only ten years old, a Chicago editor asserted that visitors would as soon think of leaving the city without having seen the yards and packinghouses as 'the traveler would of visiting Egypt, and not the pyramids; Rome, and not the Coliseum; Pisa, and not the Leaning-Tower'" (*Chicago's Pride: The Stockyards, Packingtown, and Environs in the Nineteenth Century* xi).

[13] There seems to have been a historical "window" in which slaughter enjoyed and capitalized off of its visibility rather than sought invisibility, a window in which tours of abattoirs were immensely popular, and the industry played a large role in publicizing the modern nation's "econom[ies] of motion" (Tichi, *Shifting Gears: Technology, Literature, Culture in Modernist America* 77). This window did not remain open for long, however; although tours of slaughterhouses continued across the twentieth century and into the twenty-first (often with the pedagogical purpose of giving schoolchildren a glimpse of industrial economy), the space of slaughter has become increasingly identified with resistance to graphic exposure, so that films of slaughterhouses circulated by animal rights organizations such as PETA in the second half of the twentieth century are seen as forced glimpses into a clandestine space barred from the public view.

> a long, narrow room, with a gallery along it for visitors. At the head there was a great iron wheel, about twenty feet in circumference, with rings here and there along its edge. Upon both sides of this wheel there was a narrow space, into which came the hogs at the end of their journey; in the midst of them stood a great burly Negro, bare-armed and bare-chested. He was resting for a moment, for the wheel had stopped while men were cleaning up. In a minute or two, however, it began slowly to revolve, and then the men upon each side of it sprang to work. They had chains which they fastened about the leg of the nearest hog, and the other end of the chain they hooked into one of the rings upon the wheel. So, as the wheel turned, a hog was suddenly jerked off his feet and borne aloft. At the same instant the ear was assailed by a most terrifying shriek....The shriek was followed by another, louder and yet more agonizing – for once started upon that journey, the hog never came back; at the top of the wheel he was shunted off upon a trolley, and went sailing down the room. (34-5)

Evidently, Chicago's "great packing machine" capitalized not only upon a rapid, mass processing of animal material, but upon a booming aesthetic interest in the life and death passions of animals and labourers, intertwined ethnographic subjects of industrious capital (Sinclair 102).[14]

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[14] While his fictional focus on the trials of a Lithuanian family in *The Jungle* played a pivotal role in politicizing the conditions of immigrant workers in the stockyards, Sinclair's text perpetuates racist stereotypes of African-Americans as lazy, promiscuous, and opportunistic "scabs" willing to replace desperate strikers. More than a trope for the predatory relations of capital, "the jungle" is a racist trope closely tied to a seminal scene in the novel which describes an orgy of black strike-breakers flooding the stockyards, a scene which portrays them as promiscuous and primitive bodies surging up from "the South" to undermine an Euro-American socialist movement. While one of the first working bodies to appear in Sinclair's fictional rendition of the slaughterhouse tour is the spectacularized body of the "Negro," then, work in the stockyards is otherwise identified with exploited but decidedly white ethnicities (suggesting that "the great burly Negro" here functions aesthetically in Sinclair's text to excite the currency of slaughter as spectacle). The "Negro" in the above passage appears as an even more racist and gratuituous figure inserted by Sinclair to spectacularize slaughter when read against the later description of the indolent and riotous black strikebreakers who, Sinclair suggests, can never fill the place of labour because they are the very embodiment of unruly, disorganized nature. The labour movement depicted by Sinclair can be read as protecting the hope and essence of an "America" imperiled not only by capitalist greed, but by un-improvable racial natures. See Amy Kaplan's discussion of how "the meaning of America" is constructed in its supposed distance and difference from "the jungle" ("Left Alone with America; the Absence of Empire in the Study of American Culture" 7).

In his analysis of American amusement culture around the turn of the century, Brown suggests that in thrill rides such as the Ferris wheel or roller coaster (modeled upon industrial bucketwheels and coal carts), "the pleasure industry merely replicates, while controlling, the physiological trials of modernity" (*Material* 48). Tours of slaughterhouses, already a popular sideline of Chicago's Packingtown as early as the 1860s, were designed to showcase the tremendous efficiency with which American culture managed its material nature. Slaughterhouse tourism also promised to fascinate and disturb tour-goers with the somatic sights, smells, and sounds - the "physiological trials" - of doomed animals and gore-covered labourers. Brown's understanding of the supplementary economies of work and play in turn-of-the-century North American culture is borne out by the analogy Sinclair uses to convey an effect of the speed with which Packingtown's labour strove to keep pace with the continuous flow of animal bodies: "They worked with furious intensity, literally upon the run – at a pace with which there is nothing to be compared except a football game" (39). Through the riveting view from "the stands," as it were, the dis-assembly line doubles as aesthetic spectacle, or industrial sport.

Chicago's stockyards revolved not only around the rationalized reduction of animals to meat and the myriad commodities rendered from animal remains, then, but around a supplementary economy of aesthetic consumption built into the line, with the kill floor doubling as a "circus amphitheater" where the raw footage of the "slaughtering machine" rushed at a staggering pace past visitors (*Jungle* 38, 35). Moreover, tours of slaughterhouses involved much more than *visual* consumption of the commotion of slaughter. The stockyards were also an overwhelming olfactory and auditory theatre, filled with the "sickening stench" of blood and the death cries of animals (*Jungle* 36).[15] "The uproar was appalling, perilous to the eardrums," writes Sinclair. "There were high squeals and low squeals, grunts, and wails of agony….It was too much for some of the visitors – the men would look at each other, laughing nervously, and the women would stand with hands clenched, and the blood rushing to their faces, and the tears starting in their eyes" (35). A visceral, affective response to the raw footage of the moving dis-assembly line was part of the gripping aesthetic experience offered by meatpackers. Rather than an undesireable effect, emotion and tears produced through exposure to the sensorium of slaughter were arguably integral to its aesthetic capital. If, according to its own material calculations, the machinery of mass slaughter had managed to capture "everything but the squeal," thanks to its supplementary aesthetic economy even the squeal returned as capital. For the affect (nervousness, tears, fascination) produced through exposure to the surplus sights, sounds, and smells of animal death was captured and converted into aesthetic capital through the business of slaughterhouse tours (tours which Sinclair in turn textually rendered to sensational effect).

That the business of slaughterhouse touring promised significant returns for meatpackers is evinced by the fact that in 1903 Swift and Company published a "Visitor's Reference book," which it distributed to tour-goers "as a Souvenir of a visit to the plant of Swift & Company at Chicago, Ill., U.S.A., and as a reminder of the modern methods and activities of the American Meat Packing Industry…".[16] The booklet is also proof, however, that touring slaughter was at the same time a risky business, one which meatpackers needed to mimetically manage in order for the affective surplus of animal dis-assembly to convert into capital, rather than into political agitation of the sort inspired by Sinclair's novel. At its most basic level, the Visitor's Reference Book functioned as an advertising pamphlet designed to remind people of Swift and Company's "Arrow S" trade mark when they next went to purchase meat. Among the ideological aims pursued through early tours of the stockyards, after all, was that of persuading a nation to desire meat as a regular part of its diet. The affective sights, sounds, and smells generated through what was then, according to its booklet, Swift and Company's slaughter of "twenty-five hundred cattle, seven thousand hogs and seven thousand sheep per day," thus needed to be carefully managed to prevent moments of human-animal identification from triggering metabolic revolt in tour-goers (causing them to sicken rather than salivate at the prospect of meat), or political exception to the rationalized slaughter of animals.

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[15] Wade writes that alongside their mechanized hoisting and transporting, the "new method of slaughtering hogs impressed visitors for two other reasons. One was the spurting of blood caused by heart and muscular action during the dangling hog's death-struggle. It lasted only a minute or two but startled those who expected a slow gurgle. The other surprise was the noise. Prior to the introduction of the pig-hoist, hogs never made much noise on the killing floor. However, catching the live hog by a hind leg, clamping the pulley to that leg, and raising him to the overhead rail caused a shrill, piercing cry of alarm. By the late 1860s the frantic squealing of startled hogs was a common feature of the pork houses" (*Chicago's Pride* 63).

[16] Without Mark Simpson's scrupulous archival researches into early American postcard cultures, during which he came across the Swift and Company souvenir booklet, I would still be unaware of its existence. I am grateful to him not only for bringing it to my attention, but for generously sharing a text

Swift and Company's illustrated souvenir booklet, in its deeper function of mimetically managing against the potential for affect to revert into counter-productive forms of metabolic and political revolt, intuitively chooses to recapitulate the tour through the eyes of a little white girl, no older than six or seven years of age. The booklet, through text and drawings, depicts the path of a white family through the organized "stations" of animal dis-assembly, moving from Station 1, "Live Hog Pens," to Station 14, "Beef Dressing," capped with a visit to Swift's "Oleomargarine

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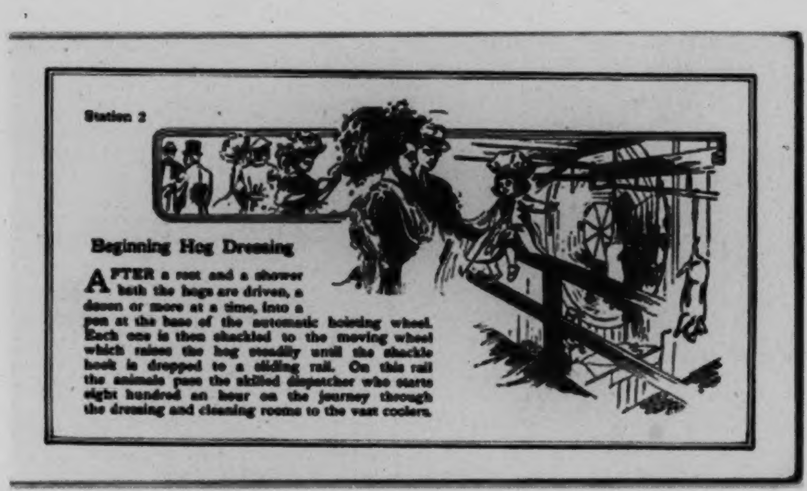
which he has plans to theorize himself in a paper on Sinclair's *The Jungle*. The Swift booklet is classified as a piece of "advertising ephemera" in a digital archive at Duke University entitled *Emergence of Advertising in America: Advertising Ephemera (1850-1920)*. The guidebook can be viewed on-line at: <http://scriptorium.lib.duke.edu/dynaweb/eaa/databases/ephemera/@Generic__BookTextView/26277;nh=1?DwebQuery=%22Swift+Co%22+in+%3Ccorpname%3E#X> (March 1, 2005).

Factory" and canning facility. The little girl is a cursor pointing and eagerly pulling them through each station. She inhabits the space of slaughter as if it is second nature to her, as if by virtue of being human the animals are as much her own property as they are Swift and Company's.



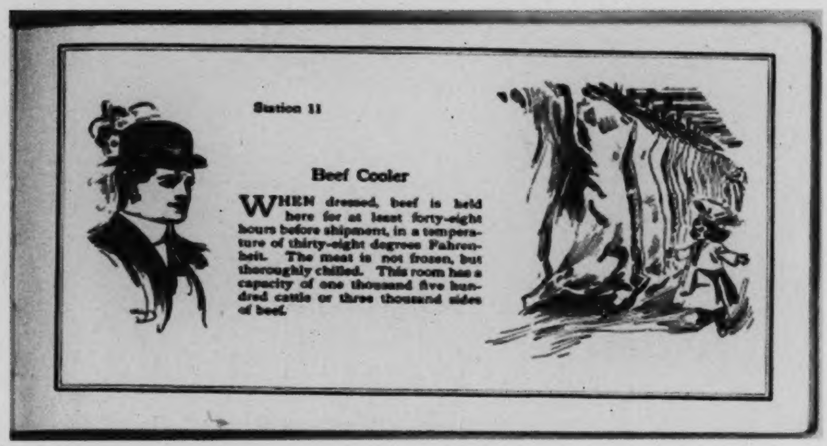
Station 2

Beginning Hog Dressing

AFTER a rest and a shower bath the hogs are driven, a dozen or more at a time, into a pen at the base of the automatic hoisting wheel. Each one is then shackled to the moving wheel which raises the hog steadily until the shackle hook is dropped to a sliding rail. On this rail the animals pass the skilled dispatcher who starts eight hundred an hour on the journey through the dressing and cleaning rooms to the vast coolers.

Figure 2. "Beginning Hog Dressing." Swift and Company Visitor's Reference Book (1903). Reprinted with permission. Advertising Ephemera Collection. Database #A0340. Emergence of Advertising On-line Project. John W. Hartman Center for Sales, Advertising and Marketing History. Duke University Rare Book, Manuscript and Special Collections Library. <http://scriptorium.lib.duke.edu/eaa/>

At Station 2, "Beginning Hog Dressing," she is shown sitting genially on a railing which separates her from a hoisting area where hogs are "shackled to the moving wheel," as happy in the presence of what is underway on the other side of the rail as she would be in a park feeding ducks (see Figure 2). In the "Beef Cooler," she gestures expansively at a row of dangling beef carcasses, beside which she stands in intimate quarters (see Figure 3). A model citizen who visits sites of national pride and feels utterly secure inside the nation's economic space, she also relays what Lauren Berlant terms "the infantile citizen's faith in the nation" (*Queen of America* 28). She shows by example - through her utter lack of alarm and her casual, cheery demeanour - that the scene of slaughter is perfectly natural and non-threatening. As the subject deemed most likely to embody a sensitive (potentially hysterical) response to her environment, the little girl thus functions as an affect meter at each station. Displaying nothing but confidence and curiosity, she communicates that animal dis-assembly is the furthest thing from traumatic, both for the animals undergoing it and the humans watching it. In short, she models the proper response to slaughter, one which Swift and Company may at some level have cannily understood becomes more difficult to recognize as pathological or sadistic when embodied by a little girl.



Station 11

Beef Cooler

WHEN dressed, beef is held here for at least forty-eight hours before shipment, in a temperature of thirty-eight degrees Fahrenheit. The meat is not frozen, but thoroughly chilled. This room has a capacity of one thousand five hundred cattle or three thousand sides of beef.

Figure 3. “Beef Cooler.” Swift and Company Visitor’s Reference Book (1903). Reprinted with permission. Advertising Ephemera Collection. Database #A0340. Emergence of Advertising On-line Project. John W. Hartman Center for Sales, Advertising and Marketing History. Duke University Rare Book, Manuscript and Special Collections Library. <http://scriptorium.lib.duke.edu/eaa/>

Yet as she is illustrated perched on the railing, with two hogs shackled upside down behind her, the little girl marks, even as she polices, the most precarious site of slippage between the spaces and powers partitioning humans and animals in the slaughterhouse. Though she is almost identical in shape and body mass to the animals strung up behind her, Swift and Company seem to be making the wager that even the subject who, due to her age and gender, is most powerless within a social hierarchy of humans, becomes absolutely powerful in relation to the animals behind her by virtue of her species difference. The certitude in her absolute humanity is only truly assured, however, by her sparkling whiteness. It is doubtful that Swift and Company would have risked such a wager – would have dared manage against the dangerous slippage between human and animal in the space of slaughter via the subject whose social powerlessness strongly invites the substitution – with a little coloured girl, whose racialization historically involves systematically mistaking her for an animal. The mutual coding of whiteness and humanness is pivotal to the success of the mimetic management operated by the figure of the little girl.

Swift and Company thus communicate their supreme confidence in the absolute difference of human and animal by giving the girl licence, in their illustrations, to play on the physical barrier dividing human and animal. Her starched white dress – matched with a white hat of the sort worn by head chefs (demarcating the power of the one who eats off from the one who is eaten) – further amplifies her humanness as an impenetrable barrier preventing any human-animal slippage in the slaughterhouse. The dress code of the rest of her family likewise bespeaks the affluence and security of an imperturbable white humanity. The mother wears an elaborate black feather hat; the father is a tastefully muted figure usually appearing in the background, on those pages in which he does appear. An older, bearded figure who could be the little girl's grandfather wears, in his intermittent appearances in the booklet, a tophat. That male figures are backgrounded throughout the booklet, seemingly there only to indulge the curiousity of a girl-child, further displaces recognition of the white maculinity and power consolidated in packinghouse owners.[17]

As well as an index of the tastefulness of the race and class who tour slaughterhouses (not to be mistaken with the races and class who work in them), dress is, like whiteness, a crucial code of humanness working to draw an unbreachable species line between humans and animals. Not only does the little girl stand upright next to animals who have been turned on their heads, she is clothed while they are flayed. She is dressed while they are "dressed." At Station 13, "Sheep Dressing," her full suit of starched-white clothing communicates her power over the sheep bodies toward which she casually points, bodies flayed of their "pelt, or skin" (as the booklet states) in an almost indecent graphic exposure. Whenever a hint of sadism lurks in the scene of a clothed figure of miniaturized power gazing upon a "dressed" animal – whenever the suspended body looks almost human - the little girl is shown gazing not at the flayed carcass but back at her mother or father, deferring the look to them. Against the hallucinatory resemblance between the flayed body of a large steer and that of a human, the booklet averts her, and by example, the public's eyes.

The message that tours of slaughter are not disturbing, that there is no reason to be haunted by the sights seen, is reinforced at the end of the souvenir booklet. There Swift and Company state that they are providing it as a "reminder of the sights of the Stock Yards," one enabling visitors "to see those sights again in memory." As its parting words suggest, the booklet is designed to be administered at the end of the tour, *after* the meatpacker has cashed in on an interest in animal death but *before* the affect excited by the aesthetic economy of slaughter can cause upset in its twin economy, which depends upon a literal consumption of meat products. Recursively training tour-goers in how they should be affected by and recollect slaughter, Swift and Company manages against the potential for affect to either provoke renunciation of meat-eating or to form into the prolonged shape of political activism.

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[17] In *Primate Visions: Gender, Race and Nature in the World of Modern Science* (1989), Donna Haraway analyzes stories of white female primatologists (Dian Fossey, Jane Goodall, and Biruté Galdikas) communicating with African primates. She interrogates how the white female "emissary" of the west enabled a white masculinist culture to expand its powers and interests through her sympathetic appearance of non-power (149). The little girl in Swift and Company's booklet similarly dissimulates the power of the white male owners of animal capital, and the violent exercise of power behind the smooth operation of slaughter. She helps Swift and Company to disavow, too, the pervasive masculinist discourse which constructs woman as meat through the crossing of sexual and alimentary codes (theorized by Carol Adams in *The Sexual Politics of Meat*, 1990).

In *Parallel Tracks: The Railroad and Silent Cinema,* Lynne Kirby argues that railroads trained audiences for filmic viewing. "[A]s an ideological paradigm, the railroad created a subject invested in the consumption of images and motion – that is, physical displacement – for entertainment" (8). Slaughterhouse tours in a different way also created a subject invested in "physical displacement – for entertainment," a subject readied for cinematic experience through the viewing of the moving picture of animal dis-assembly. Here, however, physical displacement is itself displaced onto animals and the progress of their breakdown, while human tour-goers are positioned as stationary bodies whose integrity is threatened only vicariously, by virtue of a potential affective identification with the animals. Both in the visual consumption of the rapid sequential logic of the moving line which they encouraged, and in their stimulation of affect, slaughterhouse tours arguably also helped to lay the perceptual tracks of cinema's aesthetic ideology.[18] If, as Batchen suggests, it is "the unfolding of space through time that is cinema," then the dis-assembly line as time-motion technology (and the slaughterhouse tour as an aesthetic technology which parallels its linear unfolding) realizes a cinematic disposition prior to cinema proper (117). The moving dis-assembly line mobilizes the idea of "time itself as a continuous linear sequence of discrete moments" and positions the visitor's eye as a "tracking camera" (Batchen 12, 117). The discrete, numbered "stations" strung together into a moving sequence by the pace of slaughter and the eyes of the tour-goer are analogous to the "frames" reeled at high speed past a cinematic audience to produce an ocular semblance of seamless motion. The technological mimicry of both moving lines thus suggests a complicity in their aesthetic logics, although their material outcomes are radically divergent. The first propels the dissolution of animal bodies into minute particles and substances, the second moves toward the resolution of image life. Tours of slaughterhouses can thus be read as proto-cinematic technologies, with this crucial twist.

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[18] I'm unable to take up, here, the dense collaborations of railroad and meatpacking capital, a collaboration that was not only logistical and economic, but also productive of shared "ideological paradigms," to use Kirby's words (*Parallel Tracks* 8). Railroads, slaughter, and cinema-going are materially and aesthetically imbricated in one another's rise to power, though here I focus only on the latter two.

In her study of modern French abattoirs, Noëlie Vialles suggests that the aesthetic logic shaping tours of dis-assembly lines is indeed strangely analogous to that framing the consumption of film. As Vialles writes, tours of slaughterhouses regularly disturb visitors who notice that the tour route "parallels the one-way path of the animals," the path of no return (53). This is, arguably, the threatening mimetic identification of human and animal which causes tour-goers in *The Jungle* to laugh nervously. As Sinclair writes, "Perhaps some glimpse of all this was in the thoughts of our humble-minded Jurgis, as he turned to go on with the rest of the party, and muttered: '*Dieve* – but I'm glad I'm not a hog!'" (36). Yet as Vialles adds, the parallel path of tour-goers and animals is dictated by the time-motion logic of the moving line - "seeing round an abattoir in the opposite direction would be like watching a film backwards; it would mean reconstituting the animal from the starting point of the carcass, and that would be at least equally disturbing" (53-4). Tours of slaughterhouses, hints Vialles, follow the same insistent sequential sense as the cinematic reel, a logic which frames the impassive stages of de-animating animal life as an inexorable progression.[19] The submission that packinghouse tours demand to the irreversible direction of the moving line is also the submission that cinema depends upon to achieve its mimetic effects. The animated effects accumulating from the time-motion momentum of cinema are ideologically complicit, following Vialles' suggestion, with the mass production of an animal carcass. The dis-assembled animal is in this sense the material "negative" of cinema's mimetic effects. Here, in particular, the double entendre of rendering describes the contradictory valencies of time-motion ideologies insofar as they simultaneously organize the material breakdown *and* the aesthetic reconstitution of animate life across the modern spaces of slaughter and cinema.

Their time-motion organization isn't the only point of complicity between the aesthetic economies of slaughter and cinema. Both moving lines are "moving" in a deeply affective as well as technological sense. The excitement and communication of affect is where the ideological paradigm of the moving picture of animal dis-assembly exceeds merely visual consumption of image-frames and offers a conditioning in the "total" aesthetic experience which, shortly, would also be promised by cinema. The physiological response, the nervousness, laughter, or tears provoked by tours of animal dis-assembly lines, would also be a feature of cinema-going. Recall, for instance, the legendary physiological impact of the Lumière Brothers' *L'Arrivée d'un train en gare de la Ciotat* (1895), which caused audiences to instinctively spring out of the way of the train mimetically barreling toward them on the screen (Kirby 8). While animal death was generating an aesthetic surplus in the

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[19] The complicit logics of animal dis-assembly and filmic assembly are intensified – possibly to the point where their analogic achieves exposure - when slaughter is the subject, or content, of film, as in Georges Franju's *Le Sang des Bêtes* (1947). In 1990, PETA (People for the Ethical Treatment of Animals) launched a nationwide campaign in the U.S. to promote vegetarianism by showing slaughterhouse footage; yet like *Le Sang des Bêtes*, when the aesthetic ideology of film is implicated in the logic of mass slaughter, the aestheticization of politics emerges as an especially acute issue.

Chicago stockyards and being captured through the business of touring, mimetic technologies such as the Zoopraxiscope and Kinetiscope were pursuing a semblance of affective, immediate communication under the charismatic sign of animal life. So while animals on the dis-assembly line were being aesthetically consumed as moving images, cinema was being fetishistically imbued with raw presence through the film discourse of directors such as Sergei Eisenstein. Eisenstein envisioned a "biology of the cinema" accruing not to cinema's ability to achieve naturalistic effects (which he abhorred), but rather to an affective immediacy accruing to the filmic ability to cut and paste parts into a montage whose startling juxtapositions would strike directly upon the senses (qtd. in Lippit 194). As Bill Brown notes, film theorists such as Tom Gunning, who take up Eisenstein's work to theorize early cinema as a "cinema of attractions," emphasize cinema's powers of "'direct stimulation' rather than [its] narrative logic" (*Material* 242). The interest in cinema's powers to surpass discursive mediation in pursuit of a direct, affective immediacy, is renewed later in the twentieth century by Michel Chion, who theorizes the rendering of sound in cinema as more than a "replication" or "mere imitation," but as a visceral impact or sensory impression: "In fist- or sword-fight scenes, the sound does not attempt to reproduce the real noises of the situation, but to render the physical impact of the blow…" ("Quiet Revolution…" 70-1). Cinema's "moving" effects, in this view, are associated with its ostensible ability to by-pass linguistic sense, narrative organization, and discursive mediations, in order to communicate instead through "the rapid movement of affect from one entity to another" (Lippit 186). The intensity of animal death on the dis-assembly line, the animal sights, smells, and sounds given "immediately" to the visitor's senses, is in this sense also the moving prototype of film as an affective technology. In both cases, what gets rendered invisible are the discursive techniques and the capital investments mediating the animal attraction of slaughter and cinema.

If mass slaughter and cinema are aesthetically linked by the shared time-motion ideologies organizing their visual unfolding and by virtue of their affective productivity, the rise of cinematic culture is also literally – materially - contingent upon mass slaughter. I turn now to develop the repressed material relationship between the rise of the cinematic image and what Lippit vaguely terms the "vanishing" of modern animals, an aseptic, de-politicizing rhetoric of which the motivated violence of animal dis-assembly makes a mockery. By implicating slaughter in the aesthetic disposition of cinema, and cinema in the ulterior violence of animal dis-assembly, I resist the romance Lippit pursues with cinema as a salvaging apparatus sheltering and mourning vanishing "animal traits" (196). For if motion pictures repress an aesthetic debt to the proto-cinematic "moving picture" of animal dis-assembly, they even more actively render unconscious their material investment in slaughter.

The Rendered Material of Film Stock

For moving pictures to do more than trope animal mobility – that is, for cinema's animation effects to literally develop – they required the tangible supports of photographic and film stocks. It is here, in the material convolutions of film stock, that a transfer of powers from animal body to technological media operates most non-transparently. To confront the animation effects of cinematic culture with their complicit material conditions and effects, one needs to tease out the animal ingredients of film stock via a material history of photographic gelatin. In 1873, a gelatin emulsion-coating of "animal origin" was first widely adapted to photographic uses (Sheppard, *Gelatin* 25).[20] Gelatin - a.k.a. "animal glue" - is an animal protein extracted from the skin, bones and connective tissues of cattle, sheep and pigs. As Samuel E. Sheppard writes in *Gelatin in Photography* (1923):

> As is commonly known, gelatin and its humbler relative, glue, are products of animal origin, the result of the action of hot water or steam upon certain tissues and structures of the body…. The actual material consists of the leavings of tanneries and slaughter-houses – i.e., trimmings, so-called skips, ears, cheek-pieces, pates, fleshings, etc. (25)

The suturing tissue of animal bodies is, through industrial slaughter, exchanged for the "physiological and biochemical unity" of image life in the duplicit material-aesthetic renderings of animals which helped leverage cinema into historical existence (Sheppard 25). In the material convolutions of photographic and film stocks, in the viscosity of its "negative gelatin emulsions," resides an opaque politics of rendering (Sheppard 17). Recalling the hint left by Marx that "mere jelly" names the abstract substance of the sign of exchange, I take up gelatin as one substance of the sign of automobility culture.[21]

The coating of choice for photographic and film stocks today as well as at the turn of the century, gelatin binds light-sensitive agents to a base so that images can materialize.[22] In 1884, when the word *film* was put into commercial circulation by George Eastman of the Eastman Dry Plate Company (soon to become the Eastman Kodak Company), the word "referred only to the gelatin coating upon the paper"

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[20] Samuel E. Sheppard notes 1873 as a significant date, "…for during that year the preparation of a gelatin emulsion in a practical form was successfully accomplished. That gelatin was attracting much attention at this time is attested by the fact that the first advertisement of gelatin for photographic purposes to appear in the British Journal Photographic Almanac was in 1873" (14). The Gelatine Manufacturers of Europe list 1875 as a turning point on their web page, stating that "[t]his year is considered to be a milestone in modern gelatine manufacture. Thanks to the emergence of small factories, large quantities of gelatine can now be manufactured industrially" (<http://www.gelatine.org> March 2004).

[21] See the passage in my Introduction in which I discuss Marx's mention of "mere jelly" (50).

[22] The use of gelatin emulsions has not abated with the shift from photochemical to digital imaging technologies; on their web page, the Gelatine Manufacturers of Europe assure consumers that "[g]elatine is also indispensable for digital photography. The ink-jet printer paper coated with gelatine guarantees brilliant colours and clear shapes" (<http://www.gelatine.org> March 2004).

(Collins, *Story of Kodak* 49). Turn-of-the-century dialogues between Eastman and Thomas Edison led to the incessant finessing of film stocks capable of yielding specific visual effects (sharpness, high definition, transparency) to corroborate the immediacy and vitality of moving pictures. Even today, the Kodak corporation acknowledges that it is gelatin which is the veritable "Image Recorder."[23] Yet the manufacture of gelatin emulsions protects itself as a material and ideological vanishing point, involving a retreat into the darkroom to develop the writing-with-light which photography and film appear to magically execute. In an enigmatic piece of information proffered under the heading "Emulsion, the Image Recorder" on Kodak's web page, the photo-chemical necessity of preparing sensitive gelatin emulsions in "total darkness" helps to obscure the already mystifying material conditions of film:

> At this point, the remaining manufacturing steps must be performed in total darkness. Gelatin is dissolved in pure distilled water, and then solutions of potassium iodide and potassium bromide are carefully mixed with it. Silver nitrate solution is added to this heated mixture, and the desired light-sensitive silver halide…salts are precipitated as fine crystals. (<www.kodak.com/US/en/corp/aboutKodak/KodakHistory/filmImaging.shtml> November 20, 2003).

The incidental reliance on animal remains which fails to be acknowledged in the cloaked science of gelatin manufacture is a fly in the ointment of Kodak's emulsion mystique, a repressed relation which nevertheless can, through the active "attention" Brown theorizes, be disinterred to reopen a material politics of modern cinema. For the mobilization, massification, and capitalization of image life with modern cinema is not only conditional upon time-motion sciences which take animals to be organic metaphors for technological mobility, it is also materially contingent upon "the leavings of tanneries and slaughter-houses" (Sheppard 25).

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[23] On its "History of Kodak" web page today, the Kodak corporation does homage to the understated role of emulsion coatings in image production, under the heading: "Emulsion, the Image Recorder" (<www.kodak.com/US/en/corp/aboutKodak/KokakHistory/filmImaging.shtml> November 20, 2003). It is perhaps significant that Kodak only makes transparent the until-now invisible role of emulsions once the business of making photochemical film stocks ostensibly becomes "history," due to the digitization of image production.

A study of photographic and film stocks shows that prior to the invention of gelatin emulsions in the 1870s, the development of image life already relied heavily upon albumen coatings derived from egg whites and animal blood. With the industrialization and popularization of image production pronounced by Eastman's emulsion-coating machines, his affordable portable cameras, and his film-development services, however, the relation of film's mimetic effects to a material politics of animal protein changes both quantitatively and qualitatively. As Sheppard writes, "[i]n 1884 the first machine for coating gelatino-bromide emulsion paper was built by Walker and Eastman, and the production of these papers was begun on a large scale" (18). In 1888, when the Kodak camera was introduced to the public, Eastman machines were busy coating "about six thousand feet of negative film a day" with photographic gelatin (Collins 65). It was film that Eastman Kodak also promised to develop for its customers - "You press the button, we do the rest" – encouraging miraculous rather than material knowledge around the popular production of images. By 1911, "in addition to its regular snapshot film, Kodak was manufacturing over eighty million feet of motion-picture stock annually" (Collins 129). By the latter half of the twentieth century, the great "emulsion empires" – Kodak and Fuji Film – would measure their raw stock less in footages or mileages than in global lengths: "During a single five-day work week…workers at a Kodak film plant are able to coat enough 35mm film to circle the globe" (Collins 359, 337). Yet the material means of cinema were simultaneously being rendered non-transparent by virtue of the moving image's magical effect of mimetic immediacy.

It wasn't just film manufacturers who began ingeniously capitalizing upon the remains of animal life flowing from industrialized slaughter around the turn of the century; North American entrepreneurs were widely experimenting with ways to incorporate the surplus of slaughter into material compounds capable of passing as genuine animal articles. An innovative mimetic material known as "hemacite" – a mix of animal blood and sawdust compressed under high pressure to form a virtually indestructible substance – imitated ebony and other precious substances without the prohibitive cost, rendered as it was from industrial waste products.[24] Celluloid, though not composed of the "leavings" of slaughter, was among the efflorescence of synthetic materials being engineered to embody "a versatility and uniformity unknown to natural material," allowing them to be "molded into any desired form" through mass modes of production (Meikle, *American Plastic* 11). Originally marketed by the Celluloid Manufacturing Company in the 1870s as a material capable of imitating ivory, tortoiseshell, coral, and amber, celluloid substituted for the look and feel of elephant tusks and other exotic parts of organic wildlife in luxury items such as hair combs, hand mirrors, and brooches.[25] What Jeffrey Miekle calls celluloid's "power of mimicry" enabled it, as the Celluloid Manufacturing Company states in an early advertising pamphlet, to assume "a thousand forms" and to pass as authentic so peerlessly as to "defy detection" (12).

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[24] Here's how hemacite is described in an 1892 issue of the journal *Manufacture and Builder*, in a story entitled "Doorknobs, etc. from Blood and Sawdust": "A novel enterprise has been in successful operation in Trenton, N.J. for several years, the productions of which, consisting of a line of builder's hardware and various articles, for interior decorations, are manufactured of a substance known as 'hemacite,' which material is nothing else than the blood of slaughtered cattle and sawdust, combined with chemical compounds, under hydraulic pressure of forty thousand pounds to the square inch." As the anonymous author notes, "Hemacite is the invention of Dr. W.H. Dibble, who obtained letters-patent covering his invention in July, 1877." Unlike the irregular, corruptible organic matter from which it is made, hemacite is "mathematically and uniformly correct in every particular" as well as "practically indestructible" (*Manufacture and Builder*, Vol.24, Issue 1, January 1892). A digitized version of the article appears in Cornell University Library's The Making of America digital collection (<http://cdl.library.cornell.edu/moa/index.html> April 17, 2004).

[25] The Celluloid Manufacturing Company was founded in 1871, as Miekle notes, by the Hyatt brothers (*American Plastic: A Cultural History* 11).

Beyond touting celluloid's mimetic power to pass as counterfeit for ivory or tortoiseshell, its manufacturers also argued a case for substituting celluloid for natural materials on affective grounds of wildlife conservation. The Celluloid Manufacturing Company declared that just "[a]s petroleum came to the relief of the whale…[so] has celluloid given the elephant, the tortoise, and the coral insect a respite in their native haunts; and it will be no longer necessary to ransack the earth in pursuit of substances which are constantly growing scarcer" (qtd. in Miekle, 12). As Miekle notes, ivory was "the material [which celluloid] most imitated" (17). In a Du Pont salesmen's handbook from 1919, the extinction of "great herds of elephants" was thus invoked in the marketing cause of celluloid (qtd. in Miekle, 17). A logic of imitation persuasively articulated with a logic of wildlife conservation around the mimetic management of celluloid's artificiality. Yet as Miekle remarks, "comments such as those of Du Pont served primarily to associate celluloid with ideas of luxury and rarity, to suggest that the American housewife enjoyed comforts formerly available only in a sultan's harem. No evidence suggested a scarcity of ivory during the early twentieth century" (17).

In his search for a flexible film base which could replace cumbersome glass plates and liberate photography as a mass, amateur pursuit, George Eastman saw more than just this mimetic potential in celluloid. In 1889, Eastman replaced glass plate and paper supports with thin, rollable strips of transparent nitrocellulose plastic, or celluloid film, supplying one of the missing material conditions of mass motion picture technology. Thomas Edison collaborated closely with Eastman in designing the Kinetiscope motion picture camera around the new rollable film, radically advancing the technological mimicry of continuous movement sought by early cinematographers. If a discourse of wildlife conservation buttressed celluloid's material bid to existence prior to its filmic adaptation, it would be articulated even more prominently to and through the cultural logics of photography and film, which pronounced a conservationist ideology in the call to shoot animals with a camera rather than a gun (to go "Big Game Hunting with a Kodak").[26] Étienne-Jules Marey's "chronophotographic gun," whose sequential filmic cartridges allowed him to shoot animal and bird studies in a manner which replaced the fatal taking of life with its mimetic capture, explicitly heralds the substitution of the camera for the gun.[27] Immuring animals on film was widely framed as a conservationist act; over a century later, cinema's conservationist logic still informs the cinematic theory of Akira Mizuta Lippit, who re-articulates film as a "virtual shelter for displaced animals" (187).

Yet when Lippit proclaims that cinema conserves "the traces of an incorporated animality," he celebrates film's sympathetic economy of mimesis at the cost of overlooking its pathological relation to animal life (187). For onto a base of celluloid first pitched as a conservationist alternative to endangered animal tusks, horns, and shells, Eastman applied a second mimetic layer: the gelatin emulsion encrypting cinema's contradictory material relation to animal dis-assembly, and pivotal to its mimetic power to develop lifelike images. In the translucent physiology of modern film stock - in its celluloid base and its see-through gelatin coating - it is possible to discern the "two-layered" mimesis through which modern cinema simultaneously pursues a sympathetic and a pathological discourse on animal life (Taussig, *Mimesis* 22). Film thus marks a site where a double logic of rendering is daringly, yet inconspicuously, flush.

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[26] The rhetoric of "hunting with a camera" was already in circulation in the 1890s, making one of its first appearances in Edward Augustus Samuels' "With Fly-Rod and Camera" (1890), as well as subsequent appearances in works such as Richard Tepe's *Hunting with a Camera* (1909). An article entitled "Big Game Hunting with a Kodak" appeared in a 1925 issue of *Kodakery: A Journal for Amateur Photograhy*.

[27] As Douglas Collins writes, the "barrel of Marey's 'chronophotographic gun' contained the camera's lens, behind which glass plates were arranged along the edge of a revolving metal disc. With his gun loaded with relatively fast gelatin dry plates Marey was able to make twelve exposures per second" (*The Story of Kodak* 69). The new sport of hunting with the camera as a quasi-gun is also notated, as Collins shows, in the word "snapshot," formerly "a British hunting term" which "would come to signify any photograph taken quickly and casually" (72).

Aside from one notable exception, the materiality of film rarely erupted into historical consciousness to disturb the images it supported in increasingly global quantities. In "the great emulsion debacle of 1882"(when the Eastman Dry Plate Company was still selling emulsion-coated glass plates rather than flexible film), Eastman was almost ruined by a series of fogging, overexposing plates (Collins 46). The failure of Eastman plates to properly develop images was traced back to the batch of gelatin from which their emulsion coating had been rendered. Through this early fiasco, Eastman discovered "that impurities in the gelatin itself can either promote increased sensitization or even complete desensitization" of image life, compelling him to pursue "an absolutely uniform manufacturing standard" and to monitor the undappled consistency of animal matter used in the production of photographic gelatin (Collins 46). Emulsion formulas became closely guarded corporate secrets with the growing realization that advances in light-sensitive emulsions could significantly increase film speed (and hence an image's fetishistic effect of mimetic immediacy).

In 1925, Dr. Samuel Sheppard (at that time an emulsion scientist working for Kodak) traced "organic impurities" in photographic gelatin back to the particularities of a cow's diet. Sheppard discovered that cattle who had eaten mustard seed yielded better film speeds, since a sulphuric substance in mustard oil accentuated the light sensitivity of silver halide crystals suspended in an emulsion. Sheppard's findings suggested that the failure of Eastman's plates in 1882 had been due not to the presence of an impurity in the gelatin, but rather to the absence of an impurity:

mustard seed had been missing in the diet of the animals from which it was rendered. The head of Kodak's research laboratory, Dr. C.E. Kenneth Mees, later recounted Sheppard's emulsion breakthrough to a lecture audience: "Twenty years ago we found out that if cows didn't like mustard there wouldn't be any movies at all" (qtd. in Collins 200).

In New York's University of Rochester library, holder of the George Eastman archives, only one slim folder of documents makes reference to gelatin production.[28] In one of the documents in the file (an article to all appearances commissioned by Kodak for a broader audience, and entitled "Gelatin is Simple Stuff") an anonymous writer states: "…it was generally believed that gelatin's role in the photographic process was wholly passive. It merely sat there, quietly clutching billions of bits of silver halide" (2). In the flurry of research prompted by the 1882 "debacle," however, and following from Sheppard's discovery of the photo-chemical agency of allyl mustard oil, "gelatin graduated from a passive to an active part in the creation of photographic emulsions" (2). The same document reports that "in its pure state this allyl mustard oil was not of any value as a sensitizer; it was only as an impurity, an accidental, that it achieved its value" (2). In other words, sulphur sensitizers in mustard were of use to Eastman only if they had been metabolized by an animal and were lodged as accidental trace-elements in its physiological tissue; in animal biology lay the irrational key to the technological success of filmic mimesis. In the photo-chemical parable of the mustard seed it is briefly acknowledged, in other words, that the development of mass images turns upon a "sensible trace" of animal life, a supplementarity haunting Eastman's emulsion empire and therefore becoming subject to intense biopolitical controls (Derrida, "And Say," 137). "The problem," continues the anonymous writer, "…was solved by setting up to manufacture gelatin; if Kodak controlled its making, its quality could be controlled, too" (2).

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[28] Documents pertaining to gelatin manufacture, emulsion science, and to the Eastman Gelatine Corporation, are scarce in the Rochester library Eastman archives. After searching on my behalf, archivists eventually located a slim folder containing fewer than ten documents, including early press releases and news stories on Eastman Gelatine, internal reports on gelatine's manufacturing history, a manual for employees of Eastman Gelatine, and a "Commentary" on the company's dry gelatin stocks. The archivists' difficulty in locating information on gelatin reinforces my contention that it constitutes a "material unconscious" of mass image culture.

Eastman would indeed put Sheppard's discovery to work to gain Kodak an emulsion edge by extending the corporation's control over the life and death of animal stock. In 1930 Eastman purchased the American Glue Company, a rendering plant which had been in operation in Peabody, Massachusetts (the "tannery city") since 1808. He renamed it the Eastman Gelatine Corporation and began materially managing livestock and its rendered remains exclusively for Kodak quality. Tightened micropolitical control over the raw diet as well as the cooked hides and bones of animals allowed Eastman to manage "organic impurities" in photographic gelatin, signaling the almost maniacal mastery over animal physiology making the mimetics of photography and film possible.[29] By 1939, between his two facilities at Kodak Park in Rochester, New York, and at Peabody in Massachusetts, Eastman was able to manufacture nearly all of the gelatin Kodak needed. "And it was gelatin made to specification; for by this time the key to gelatin's character had been found. Gelatin could be made so that the essential 'impurities' were present in precisely the right amount" ("Gelatin is Simple Stuff" 15). In its new appreciation of gelatin's critical role in image development, the Eastman Gelatine Corporation skimmed only the most refined "stuff" off of the rendering vat for its manufacture of sensitive photographic emulsions, allotting b-grade gelatin to food and pharmaceutical markets and no longer even bothering with animal glue. North America's aesthetic appetite for filmic images had spurred a reorganization of animal capital, one concretely reflected in Eastman's purchase of the Peabody plant, his re-gearing of the facility toward the manufacture of photographic gelatin, and his sale of the glue-making side of the business. By simultaneously fetishizing animals as naturally photogenic figures-in-motion (as per the studies of Marey and Muybridge) *and* as the emulsion industry's most photo-sensitive substance (nature had seemingly designed animal physiology "with the photographic process in mind"[30]), automobility culture accommodates a wildly disjunctive discourse on animal life. The kind of animal sign produced through this disjuncture is at least double: disembodied signifier of seamless motion *and* mere material processed in staggering quantities at accelerating speeds through the abattoirs and reduction plants of the West.

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[29] In an article of unspecified date entitled "This is Eastman Gel…" (one the archival documents dug up by archivists at the University of Rochester Library), *Kodakery* editor and author Bob Lawrence writes: "It is estimated that parts of 5,000,000 or more animals go into its gelatine making annually." In 1999, the Eastman Gelatine Corporation was still annually purchasing 80 million pounds of bovine skeleton from slaughterhouses to make into photographic gelatin ("A Kodak Moment: Company Grinds Cow Bones, But Keeps Costs Close to the Bone." *The Wall Street Journal*. January 18, 1999). . Its largest supplier of cow bones, at that time, was Monfort Inc., of Greeley, Colorado.

The degree of biopolitical control requisite for managing the animal "accidental" of mass image culture is brought into even greater relief when Kodak's material unconscious – i.e. the image industry's repressed historical relation to animal rendering – is seen to have encompassed a traffic in animal parts from all over the world. In the gelatin documents which constitute something of an unclassifiable in the Eastman archives, another article gives surprising insight into Eastman Kodak's heterogeneous global sources of animal bones, horns, and hides, revealing a transnational traffic dating back to the 1880s and flourishing up until the Second World War. In "Commentary on Dry Gelatine Raw Stocks in Storage" (1969), a report which to all appearances was intended solely for an internal corporate audience, the global heterogeneity of animal material which Eastman Kodak collected to render into gelatin is glimpsed. The report shows that the corporation organized its imported "dry stock" into taxonomical Types in an effort to distinguish gelatin rendered from Chinese water buffalo, from "Type IV (X) material" (sacred cattle dying a natural death on the Indian subcontinent), or from "Type III material" (South American livestock). Rendering a global heterogeneity of animal matter into homogeneous Types capable of feeding the precision manufacture of photo-sensitive gelatin required navigating geopolitical difference as well as controlling physiological variabilities of animal matter. Rendering a global traffic in animal remains immaterial to image culture ("You press the button, we do the rest") entailed not only reducing animals from all over the world to the abstract substance of the sign of photographic and cinematic exchange (to "mere jelly"), but also rendering the volatile geopolitics of a traffic in animal remains historically "unconscious" to the popular culture of film.

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[30] In *The Science and Technology of Gelatin* (1977), A.M. Kragh writes that because gelatin "contains the sulphur sensitizers later found essential for obtaining high sensitivity," and because the DNA in gelatin is a natural restrainer, "it might be thought that gelatin had been designed with the photographic process in mind" (471).

For as "Commentary on Dry Gelatine Raw Stocks in Storage" inadvertently exposes, gelatin indexes complex geopolitical histories in which the mimetic power of mass images is imbricated in volatile global flows of raw material. Although demand for Eastman Kodak photography and film stock spiked during the Second World War (driven by a new military interest in aerial photography and propaganda film), information relayed by the "Commentary" in the Eastman archives shows that the war also seriously disrupted the global supplies of raw stock fueling Kodak's emulsion empire.

> The Japanese invasion of Southeast Asia completely disrupted the collection of Water Buffalo hides….(The lack of shipping and also the submarine activity effectively prevented any substantial quantities of cattle bones picked up in India from reaching Europe - and even if such shipments had been possible, they would have been to no avail, since Germany occupied the areas in Belgium and France where the acidulating plants are located.) Likewise, very little Type III material got through to us from South America. (2)

As the document reports, supply of "Type III material" also dried up when the "Peron military dictatorship took over the Argentine government in 1944, and an embargo on raw bone exports was put into effect" (3). Indeed, in the seemingly mundane historical inventory of dry gelatin stock is cached a loaded catalogue of geopolitical events giving glimpse into the material histories upon which modern mass imagery was contingent:

> 'Hoof-and-mouth' disease, temporary embargoes, the closing of the Suez Canal in 1967 after the 6-Day Arab-Israeli war, squeezing of the Grist Osseine supply temporarily by the Calcutta 'ring' or the Brussels 'club', long-shoreman and shipping strikes, the India-China war, the India-Pakistan war, political upheavals in South America – all these and other factors influenced the supply picture from time to time, but we always were able to work around any particular problem with the help of our inventories. (5)

Both the first and second world wars confronted Eastman Kodak with its vulnerable reliance on foreign gelatine, motivating Eastman to secure domestic supply and production of rendered material.[31] The Eastman Gelatine Corporation became pivotal to Kodak's ability to continue and even accelerate its manufacture of film amidst global crisis.

One last item among the meagre file of documents referring to gelatin in the Eastman archives - *A Handbook for the Men and Women of Eastman Gelatine Corporation* (1945) – allows me to develop the biopolitics of gelatin production from another angle. In this instance, automobility involves Taylorizing the worker into an "intelligent gorilla" of mass production, into a subject as scrutinized and standardized as the animal "accidental" of image culture s/he helps to manufacture. In its *Handbook*, "the Corporation" lays out the system of wages, benefit and insurance plans, and codes of conduct for its over 350 employees. This information is spelled out under the kindly gaze of "the Kodak family" father, Eastman, whose photo-portrait appears on the Handbook's first page. Eastman's benevolence is reinforced with the information that the Corporation supplements employees' regular pay with annual wage dividends based on the value of its common stock, "paid in recognition of the contribution which loyal, steady, and efficient workers make to the success of the Corporation" (9). Like Ford's five-dollar-a-day wage, Eastman generously affords its labour the ability to participate to some degree in the conspicuous consumption of the mass commodities they help to produce, possibly pocket Kodaks to better enjoy the week's worth of vacation time allotted employees of Eastman Gelatine each year. The Corporation also generously encourages "constructive suggestions" from employees for "improving production methods, for producing economies in operation, especially in preventing waste, and for providing better and safer working conditions" (11, 31). Any employee whose suggestion is adopted can anticipate being monetarily rewarded.

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[31] In an article in *The Boston Sunday Herald*, "Eastman Kodak Subsidiary Pulls Weight in Production" (October 27, 1957), it is noted that if the 1882 emulsion fiasco taught Eastman "the lesson of gelatine purity," it was World War I which first taught him "the lesson of supply," motivating the company to domestically manufacture as much of its own gelatine stock as possible to make it less contingent upon trade with potentially hostile nations (Original in University of Rochester Library).

The enticements of belonging to Eastman's family of trained gorillas are tempered, however, by "A Few Helpful Rules." The Handbook emphasizes that it has little tolerance for "Tardiness," and that it expects "Neatness." Under the heading "Personal Conduct," the training of its labour force takes on a less persuasionary and more forceful aspect: "…everyone is expected to refrain from improper language and to avoid horseplay of any kind. To interfere with or disturb another in his or her work without reason is cause for discipline" (35). Again, an undertone of severity and surveillance laces the benevolent discourse of the Corporation when it comes to "Registering Your Time": "By registering your times of entering and leaving work on your time-clock card, you help to make sure that your pay will be correctly made out"

(34). Yet as Marx first clearly discerned, the time of labour is a differential value under capital. If one kind of surplus is being rendered at Eastman Gelatine by skimming an "extra" off of animal remains, the more "classical" surplus rendered from capital's workforce is skimmed off in the form of extra labour time. The employee clock card that is of such a piece with Fordism is a condensed figure of this concealed surplus mechanism of capital, an instrument of seemingly objective time-accounting which renders invisible the differential between necessary and extra labour time so crucial to corporate profit margins. Industrial capitalisms' economies of motion and scale chase an increasing reduction of necessary labour time (through the "speed ups" of moving lines which Sinclair describes so acutely in *The Jungle*), and bring the time of labour under even more minute measure. Hence the warning extended by the Corporation in its *Employee Handbook*: "Failure to punch your clock card cannot be excused except for some very good reason" (34).

It isn't just the time of labour that is carefully clocked as an ostensibly objective value; monitoring the behavior and cleanliness of its workers is integral to the "purity" of the gelatin manufactured at Peabody. As the Handbook explains to employees, "Gelatine is one of the most important raw materials used in the manufacture of photographic films, papers, and plates….The gelatine used for this purpose must be of exceptionally high quality since the slightest impurity may affect the sensitivity of the emulsion" (6). At the Eastman Gelatine facility "[g]ood housekeeping is expected of everyone" to prevent material specks and motes from marring filmic emulsions and the pure translucence of image life (34). The Handbook closes with a prohibition which calls to be read, ironically, as a summation of the invisibility demanded of the material nature and labour of mass visual culture: "No one is permitted to take pictures on Eastman Gelatine property without permission" (35).

Automobiles: Recreating Animals

Having theorized the cinematic disposition of animal dis-assembly and the "material unconscious" of film, I turn now to track how the automobile metaphorically and materially renders animal life. In the production and consumption of automobiles I don't probe, as I do with film, for the literal incorporation of a physical piece of animal life. Automobiles' violent material relation to animal life is more oblique, revolving instead around a talismanic promise of *recreation* involving the viewing of wildlife in its native haunts via auto-touring, camping, and hunting with a camera.[32] The mass mobility introduced by cars is supported by a massive material infrastructure of roads and fossil fuel extraction, cutting deeply into animal habitat and physically displacing the wildlife which automobile discourse holds out as its fetishistic destination. Its suppressed relation both to the displacement of wildlife and to the technologic of the dis-assembly line profoundly contradicts automobility's totemic institution of vital animal signs.

Time-motion ideologies organizing modern moving lines will undergo reorganization and partial dislodging as I track from Ford's early assembly lines to General Motor's Saturn "experiment" and the post-Fordist culture of automobility which Saturn announces. The assembly line's organization of nature and labour will be revised as GM spawns Saturn in an attempt to compete with Japanese imports and to create a North American answer to a "just-in-time" model of production (i.e. Toyotism) in which the material stockpiles, serial logic, and standardized products of

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[32] "As Foster Rhea Dulles points out in his history of American recreation, the automobile 'greatly stimulated the whole out-door movement, making camping possible for many people for whom the woods, mountains, and streams were formerly inaccessible'" (Flink, *Automobile Age* 169).

Fordism are viewed as liabilities. The postmodernization, or in this case, Saturnization of Fordism purportedly initiates a radical new time and space of production, a participatory, "horizontal" relation to the nature and labour of automobility culture. However, through an analysis of two 2002 Saturn *Vue* Sport Utility Vehicle advertisements, I suggest that the rendering of animals remains a productive double logic, or illogic, organizing symbolic and material returns across the "econom[ies] of power" of Fordism and post-Fordism (Seltzer 40). As a persistent and productive illogic of cultural reproduction whose prototypical subjects are animal, rendering is reformulated rather than superceded with the Saturnization of Fordist time-motion principles. Animal signs remain crucial ciphers, then, through which a shifting discourse of automobility manipulates and manages productive contradictions between its material conditions and aesthetic effects. My aim is to trouble the ubiquity with which automobiles are metaphorized as animal and, via an analysis of two ads which render this configuration explicit, to expose the mimetic controls of American capital adjusting and fine-tuning identities and differentials of technological mobility and animal life.

Michael Taussig claims that "modernity has ushered in a veritable rebirth," a "recharging and retooling of the mimetic faculty [via] new techniques of reproduction (such as cinema and mass production of imagery)" (*Mimesis* xix). As I've already hinted, the mimetic relation of culture to nature in North American modernity is most radically retooled through the technologization of the sign of mobility itself around the turn of the twentieth century. Through the influence of time-motion studies, variants of the moving assembly line enabled abattoirs, auto plants, and film houses to put nature into mass production as a new aesthetic and a material quantity. If Ford modeled his Highland Park plant on the technologized moving lines of Chicago's vertical abattoirs, filmic and automotive productions in turn historically referenced each other's technological advances. As Kristen Ross notes,

> …the two technologies reinforced each other. Their shared qualities – movement, image, mechanization, standardization – made movies and cars the key commodity-vehicles of a complete transformation in European consumption patterns and cultural habits. (*Fast Cars* 38)

The mimetic loop triangulating the complicit economies of animal dis-assembly, automobiles, and motion pictures situates the car as just one among other technologies of automobility culture, rather than as constitutive of it. I implicate the automobile in the same double logic in which I've implicated animal dis-assembly and the development of film - as simultaneously a material and an aesthetic technology of capital. In Ross's words, "the car is not only implicated in a certain type of mobilization by capital, it is also an active though partial agent in the *reproduction* of that structure" (19).

A 2002 television ad for the Volvo *Cross Country* offers glimpse into a mimetic motif recurring across the early and advanced economies of automobility modeled by the Ford and Saturn corporations, one which juxtaposes animals and machines as technological doubles. The ad, opening with a shot of the *Cross Country* as it speeds North, at dusk, toward an exotic arctic house, focuses in on a female driver with a man asleep in the passenger seat beside her. The woman-car hybrid is the only body moving on the road. Suddenly, a herd of caribou erupt out of the dusk and stream across the highway, a latitude transecting the longitude of the car's movement directly within the cross-hairs of the driver's field of vision. The car comes to a stop: time and motion are for an instant suspended in a magical pause as the scene transacts a mimetic identification between the migratory animal collective and the *Cross Country*. The car and the caribou commune, it appears, by means of their common "emotional sensors" and innate powers of "affective computing" (Dery, "'Always Crashing'..." 67). The female driver, moreover, is essential to the consolidation of the mimetic moment: woman's biological wiring ostensibly attunes her to the mysterious uni-animality of car, caribou, and driver. The male passenger, rational consciousness of culture, remains oblivious to the magnetic call-of-the-wild roused in the *Cross-Country* and in his wife. After a second of still sensing, the caribou disappear into the night, the *Cross-Country* resumes full speed north, and sparse, parting text flashes on the screen: "Volvo for life."

The aesthetic interest generated by crossing animal and automobile (not to mention woman) at this metaphorical intersection is profoundly at odds with the roadkills and other displacements or incisions marking material junctures of nature and capital. Yet the Volvo ad manages against an antagonistic, material politics of automobility through the mimetic identification of animals and automobiles it poses. Through the sign of the animal, I contend, cultures of capital mask a meta-discourse of mimesis itself (or what Adorno and Horkheimer term an "organized control of mimesis" [qtd. in Taussig, *Mimesis* 68]), in this case one working to naturalize the relations of automobility. The powers of animals and the liveliness of mimetic machines are aesthetically juxtaposed to this end.

In Michael Taussig's reading of the famous RCA Victor Logo "His Master's Voice," which depicts a dog listening quizzically to the sound reproduction emitted from a phonograph, he explores how such a juxtaposition even more specifically turns a discourse of mimetic "fidelity." As opposed to the car and the caribou in the Volvo ad, in the RCA Victor Logo it is the testing of canine fidelity against the superior machinic fidelity of the phonograph which is at stake, establishing a relation of similarity and difference between them to manufacture common sense and consensus around powers of technological reproduction.[33] As Taussig discerns, however, "[w]here politics most directly enters is in the image's attempt to combine fidelity of mimetic reproduction with fidelity to His Master's Voice," according to the twin connotations of "fidelity" as affective obedience (i.e. faithfulness) *and* as the mimetic measure of an exact analogue reproduction (*Mimesis* 223). In this mimetic motif, technological reproductions so true-to-life that they pass for originals are tested against the natural fidelities of an animal. Capital's mimetic machines are tested upon an animal's sensory and soulful faculties with both complimentary and comic results, as the RCA Victor Logo shows: the dumb animal is bewildered, tricked by the masterful reality effects of the technological reproduction. Thus the animal is simultaneously attributed with a natural talent for sniffing out the difference between the full presence of an original and the imposture of a copy *and* discriminately put back in its place when its senses are outwitted by a mimetic machine. The ostensibly "natural" covenant between dog and master becomes a highly productive trope of fidelity helping capitalism to exploit both sides of the mimetic coin: the identity *and* difference of the technological media and their biological doubles. The "mimetically capacious" technologies of capitalist culture thus emerge as more than equal to the biological fidelities of animals. Yet they also incessantly repeat their challenge to an animal figure indispensable to the modern organization of mimetic sense. As Taussig puts it, "[t]he technology of reproduction triumphs over the dog but needs the dog's validation" (213).

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[33] As Lisa Gitelman shows in *Scripts, Grooves, and Writing Machines: Representing Technology in the Edison Era* (1999), when it wasn't an animal it was a racialized human other who was plugged into this mimetic template to serve as the phonograph's "natural" foil. Gitelman analyzes a stereotypical Edison-era anecdote of a black man who, listening to a Buckeye Music Company phonograph recording of "The Flogging" (excerpted from *Uncle Tom's Cabin*), jumps up and declares he'd like to get that slave-driver. "The man didn't hear the phonograph or the record," writes Gitelman, "he heard *through* them to Simon Legree whipping Uncle Tom. It is this selective hearing that the Buckeye proprietor recognizes as the highest compliment that can be paid to any communicative or inscriptive medium, including the talking machine" (121). Gitelman notes that the "proprietor's anecdote plays off an important trope resident in Anglo-American constructions of race and class, the familiar narrative of the alien naif who mistakes mimetic representation for reality" (121).

A similar naturalization of technological fidelity is factored out through the juxtaposition of *Cross-Country* and caribou in the Volvo ad, in which the car as animal analogue passes the biological test posed by the caribou crossing its path. I will locate other echoes of the discursive coordinates of the RCA Victor logo – its mimetic calibration of technological and animal bodies, faculties, and fidelities – beyond the specific context of early phonographic reproductions and in contemporary ads for the Saturn *Vue*. The deployment of animal signs in pursuit of a naturalizing discourse of mimesis (controlling against recognition of its political nature) is as ubiquitous in "late" as it is in earlier eras of capital. The Saturn Corporation, emerging at the ostensibly tectonic moment when a Fordist logic of automobility cedes to a post-Fordist logic, repeats the superbly productive animal aesthetics of the RCA Victor logo in its own mimetic management of automobility's intensifying contradictions.

Before engaging the Saturn ads, I backtrack for a moment to Henry Ford, to trace what amounts to a highly cursory beeline through a complex century of automotive culture, but a beeline whose purpose is to provide at least a glimmer of historical context as I direct my analysis of automobility and animal signs toward the discourse of the Saturn *Vue*. According to James Flink, Ford "longed to rid the world of unsanitary and inefficient horses and cows," and thus set to work to replace the horse, long the organic standard of physical transport (*Automobile Age* 114). Impressed by the moving dis-assembly lines of Packingtown and the time-motion studies of Muybridge and Taylor, Ford devised a mode of mass production which would indeed usher in a "horseless age."[34] Jonathan Crary explicitly links the time-motion studies of Eadweard Muybridge to the physical displacement of animal traction by new locomotive powers: "the horse, which had been for thousands of years the primary mode of vehicular movement in human societies, is symbolically dismantled into quantified and lifeless units of time and movement" (*Suspensions* 144). In 1908, the Ford Motor Company presented its first mass-assembled vehicle to the public, the Model T. Having effectively displaced their organic models, the cars manufactured by the Ford corporation began to be explicitly marketed as substitute animals. After the release of the Ford *Mustang* and *Pony* in the 1960s (and with the awareness that I eclipse decades of complex automotive history and politics by abruptly skipping forward and back through the century), the mimetics of the Ford corporation began to challenge wild rather than domestic animals as ultimate models of organic mobility and effortless speed. Indeed in the 1970s and 80s, Ford launched a wild animal series with the Ford Mercury *Bobcat* (1978), *Lynx* (1980) and *Cougar* (1983).

While Ford's modeling of the automotive assembly line off of the dis-assembly of animals in the abattoir had given him a logistical headstart, in 1927 General Motors gained an aesthetic advantage over Ford under the presidency of Alfred Sloan. Sloan established the first Art and Colour Department in the automotive industry, hired Harley Earl as its head, and turned styling into an economic priority (rather than superficial flourish) of automobile manufacture. Earl's previous work on Hollywood film sets allowed him to bring "celluloid lessons" to bear upon automotive sheet metal (Gartman, *Auto-Opium* 93). Under Earl, an aesthetic of organicism carried the mimetic capabilities of the automobile head and shoulders over the assembled look of Ford's Model T. Earl was known for producing full-size model cars out of clay to achieve effects of streamlining and organic curvature which conceal the component make-up of mass assembled vehicles.

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[34] In 1895, the first two periodicals devoted to automobiles appeared: *Horseless Age* and *Motocycle* (Flink, *The Automobile Age* 18).

The mimetic trajectory which led the Ford Motor corporation to its *Bobcat*, *Lynx* and *Cougar* series of the 80s (and later to its current breed of wild off-road SUV), was one which the GM corporation also followed, often with an edge on ostentatious styling. GM pushed its streamlining aesthetics to the aerospace and fish-inspired "finned" vehicles of the 1950s. The OPEC embargo and energy crisis of the 1970s forced GM to review its overblown aesthetic agenda, however, and to consider the manufacture of sub-compact and energy-efficient cars (again, this overview fails to address the complexity of the OPEC embargo and other events in the 1970s, a decade viewed by many as the historical turning point from modernity to postmodernity). In 1985, GM spawned the Saturn Corporation to this economizing end. Less than two decades later, however, the vision of the sub-compact fell to the wayside as Saturn trumpeted the arrival of a new Sport Utility Vehicle. The Saturn *Vue* was introduced through a $35 million dollar ad campaign running from February to May of 2002.[35]

The Saturn Corporation is popularly viewed in a flattering light, as a rogue division of General Motors determined to disassociate from its lumbering parent company by testing a "flexible" post-Fordist culture of automobility that the rest of GM would be wise to model. However, reading Saturn culture as a biopolitical force of capital and as a seductive agent of what Foucault terms "governmentality" enables me to theorize the significance of its animal ads from within the context of the broader capitalist economy of power they help to mimetically manage. Among the complex motives inspiring the Saturn "project" were the rapid loss, over the course of the 1970s and 80s, of GM's domestic market to quality Japanese imports, its growing realization that among those choosing imports over cars of dubious quality "made in America" was an increasingly affluent constituency repelled by the masculinist brand cultures of companies like GM (i.e. middle-class women), and its even more compelling insight that to continue making exponential profits the auto-industry needed to avert nagging losses of time and money caused by labour disputes. GM's Saturn "experiment" refers, above all, to a labour-management relations model incubated at the Saturn "learning laboratory" in Spring Hill, Tennessee (Rubinstein and Kochan 2), one whose inscription as a pedagogical rather than an economic project is an indication of automobility's increasingly mimetic means. Saturn thus seeks to articulate with all of the politicized constituencies alienated by GM, including labour (by assimilating union leaders into corporate management positions), environmentalists (by committing, originally, to the design of a small, fuel-efficient car), and women (who constitute 50 per cent of Saturn's buyers and were ostensibly attracted by Saturn's introduction of a non-negotiable price policy in its networked shops).[36]

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[35] The ad campaign was given to Hal Riney of Publicis Groupe, San Francisco. The ads reprinted in this chapter appeared in *Martha Stewart Magazine* (March 2002) and *Outside Magazine* (February 2002). Television ads picturing the *Vue* running with a swarm of ants toward a futuristic "colony," or morphing into a rabbit as it darts behind trees, aired in 2002 with coverage of the Salt Lake City Olympics, CBS's *Survivor* series, and during the Grammy Awards. According to *AdAge*, GM was the nation's top ad spender in the first quarter of 2002, with $609 million in measured media vs. $555 million for the same period the previous year (<http://www.adage.com> April 2, 2002).

At the same time, however, Saturn operates on an undertow of nationalist sentiment for a "made in America" brand of Toyotism, one heavily tinged with xenophobia directed at Asians. An unrepentant blast of the racist nationalism played to by U.S. auto-manufacturers is emblazoned in a 2002 magazine ad for the Dodge *Durango* Sport Utility Vehicle, with the caption: "It's a big fat juicy cheeseburger in a land of tofu." If a racist, sexist, and nationalist culture of automobility is insinuated within this ad's "alimentary code" (to borrow from Claude Lévi-Strauss), its metaphor of consumption is also rife with the suppressed politics of animal rendering (*The Raw and the Cooked* 269). The ostensible difference which the progressive Saturn corporation seems to represent from the kind of virulent conservatism inscribed by this Dodge ad (by proclaiming itself a "Different Kind of Company and a Different Kind of Car"), can be read, instead, as a biopolitical dispersal through which monolithic capital dissembles into concentric brand cultures with minoritarian appeal. In Saturn's ability to articulate with constituencies antagonistic to the stock figure of Fordist capital, it arguably only pursues the hegemony of automobility by other means.

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[36] Saturn's fixed retail-price policy eliminated the practice of bargaining over car prices, a practice which ostensibly disenfranchised women who were less likely to bargain for a lower price. The fact that Saturn's current CEO is a woman, Cynthia Trudell, reinforces the difference it claims to represent from an automotive industry with entrenched gender, race, and labour hierarchies. "The idealized customer for the Saturn coupe," writes Joe Sherman, "...was a single female, around thirty-five, a woman who was image conscious and wanted 'to make a personal statement with her car'" (*In the Rings of Saturn*, 28).

Saturn's interest in articulating a new relation to labour is perhaps most revealing of what I take to be its biopolitical culture of capital, its modular exercise of a non-coercive, participatory cultural hegemony. "Saturn represents the most radical experiment with a new labor relations model in the United States and, indeed, perhaps in the world," claim Saul Rubinstein and Thomas Kochan in *Learning from Saturn* (7). In the biopolitical culture of post-Fordist automobility represented by Saturn, the strategic mixture of persuasion and force which Gramsci saw as key to understanding the success of Fordist cultural hegemonies undergoes a redistribution. Sympathetic technologies of persuasion are increasingly favoured, while pathological technologies of force are increasingly relinquished as posing more of an obstacle than an incitement to productivity and profits. At Saturn, the "radical" empowerment of labour thus involves raising it to the status of a "stakeholder" in the corporation. In its

1985 Memorandum of Agreement with the United Auto Workers union (UAW), the Saturn corporation states that:

> As a stakeholder in the operation of Saturn the UAW will participate in business decisions as a full Partner including site selection and construction, process and product design, choice of technologies, supplier selection, make-buy decisions, retail dealer selection, pricing, business planning, training, business systems development, recruitment and hiring, maintenance, and engineering. (qtd. in Sherman 21)

Significantly, many in the UAW perceived Saturn's participatory model as enabling capital to dangerously articulate with and assimilate union opposition, an opposition felt by many autoworkers to be already deeply co-opted.[37] They argued "that the Saturn approach would erode the union's ability to represent its members by aligning the leadership too closely with management's interests" (Rubinstein and Kochan 23). The risk of compromising the aims of capital by placing union members in management positions is far outweighed, I would agree, by the probability that such a biopolitical move will compromise the antagonistic potential of labour.[38]

Alongside inviting labour representatives into management roles, the Memorandum maps out a post-Fordist environment driven by "self-directed work teams," announcing that "Saturn has no supervisors in the traditional sense"

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[37] That the UAW was, long before GM's Saturn project, already compromised in its ability to politicize automobility culture is perhaps indirectly attested to by the rise of "wildcat strikes" in the second half of the twentieth century. A wildcat strike is the name given to a spontaneous walkout of auto- (and other) workers. In those instances when a walkout isn't called or endorsed by union leaders, wildcat strikes provoke antagonism not only between workers and automotive manufacturers but between workers and the unions which claim to represent them. The identification of labour with the "wildcat" in these impromptu walkouts is strikingly different from the proprietary identifications of corporate branding, i.e. the Ford *Cougar*, *Lynx*, and *Bobcat*. The organized control of mimesis through branding evokes, after all, the material practice of marking animal property by searing signs of ownership onto livestock. In current corporate cultures of semiotic branding, a property logic now seizes possession of animal signs rather than bodies to monopolize their currency. When wildcat strikers identify with the sign of animal life – especially when their strikes preempt the representational politics of unions felt to be co-opted by corporate capital - labour movement disrupts not only the workplace, but also capitalism's organization of mimesis.

[38] If I were to develop the "material unconscious" (Brown) of Saturn's ostensibly radical labour relations model, I would begin by retrieving the fact that while the corporation was empowering UAW labour members imported from GM divisions across North America, it failed to honour its promise to hire local labour from among Spring Hill's largely African-American population.

(Rubinstein and Kochan 20, 22). Such a statement calls to be read less as a sign that post-Fordist corporations such as Saturn have relinquished their powers of management and surveillance, than that these powers have become biopolitically embedded in capitalism's subjects, who self-manage according to what appear to be their own personal desires. Yet as Foucault argues, the internalization of surveillance (part of what he terms "governmentality") has been a feature of modern disciplinary power at least since Jeremy Bentham's design for a prison Panopticon; it thus cannot be taken as a signpost of post-Fordist culture. If there is a quality of newness to Saturn's discourse, it consists more in the sense that a discursive power of governmentality previously operating non-transparently has become the conscious content, as it were, of a post-Fordist corporate discourse of "teamwork." The currency of the "teamwork" rubric in post-Fordist workplaces perpetuates a particularly insidious form of corporate (rather than state) governmentality, transparently productive of self-motivated subjects empowered to amass their talents and to energize capital in the name and spirit of a collective sociality.

In spite of – or perhaps because of – its transparency, Saturn's discourse of corporate governmentality registers positively on the political radar of postmodernity. Indeed, labour historians Rubinstein and Kochan interpret Saturn's discourse of teamwork as a transformative democratization of corporate capitalism, celebrating it as a model of the "networked organization" which is "set up to achieve multiple objectives of multiple parties rather than to simply conform to the single goal of the American firm that seeks to maximize shareholder value" (37). Yet what they read as promising signs of social conscience softening and transforming the capitalist corporation need to be interrogated, I contend, as signs rather of Saturn's biopolitical stakes in the very "production of social life itself" (Hardt and Negri xiii).

That Saturn seems historically belated in articulating, in postmodernity, a discourse of governmentality which Foucault diagnosed as a feature of modernity, may also be a symptom of the fact that its Fordist predecessors were slow to appreciate and achieve the effects of governmentality. Surveillance in the Fordist auto-industry was predominantly still an external force, bearing down upon workers through the claustrophobic scrutiny of floor overseers, factory and union spies, and vicious strike-breakers. Despite his attempts, Ford himself was never able to successfully implant the will of industrial capital into the soul of the worker in the shape of an internalized work ethic, ascetic morality, and "personal" desire for efficiency. Rather, workers in Ford factories were under constant moral and corporeal surveillance from without, even as they were seduced and soothed by his generous wage-pay. James Flink notes that "the reduction of [the worker's] movements to a minimum" on a Ford auto-assembly line went so far as to include a moratorium on talking, such that workers "learned to communicate clandestinely without moving their lips in the 'Ford whisper' and wore frozen expressions known as 'Fordization of the face" (119). It ironically appears that the auto-industry, archetypal of Fordism as a modern form of hegemony, is belated in achieving its hegemonic effects, to the extent that its sympathetic rather than pathological force only realizes its full potential in postmodernity (i.e. in Saturn's successful discourse of teamwork and its transparent corporate governmentality).

Alongside Saturn's sympathetic relation to labour is the (im)material relation to nature announced by its post-Fordist economy of automobility. Material stockpiles feeding the "volume production of standardized commodities" in Fordist culture are replaced by systems of flexible accumulation and just-in-time production of customized vehicles (Flink 44). Adjusting its production trajectory to meet custom orders, the "networked organization" summons parts and materials from a web of independent suppliers, parts which then pass through a cluster of "self-directed" teams (heavily aided by electronics technologies) capable of assembling a flexible range of computer-rendered models, to finally ship cars out just-in-time to customers through a web of retailers. This post-Fordist production scenario entails an even greater command over material resources than that demanded by the time-motion economies of Fordist assembly; here, materials are summoned, sutured, and dispersed with the speed and seeming ease of technological communication, to all appearances transcending frictions of time and space. Yet the aesthetic effect of immediacy and immateriality encouraged by post-Fordist discourses of automobility – so that a car's computer-rendered image appears to constitute its moment of production – displaces recognition of automobility's intensifying material conditions and effects.

The aesthetic effect of a custom-designed automobile which appears to have a manifest rather than a manufactured existence, and which travels across a post-Fordist landscape blended into the company of wildlife, is fetishistically condensed in the two Saturn *Vue* ads I have been circuitously approaching. The *Vue* – "at home in almost any environment" - is just one SUV among many eager to neutralize political antagonisms of automobility culture. The tagline of Toyota SUVs is "You Belong Outside"; Ford SUVs, such as the *Explorer*, celebrate "No Boundaries." Before it changed its tagline to "Shift" in September of 2002 (fusing automotive gears and digitized cursors into a single function key of mobility), Nissan's *Xterra* was animalistically rather than fossil fuel "Driven." Yet an even more unabashed formulation of identity between automobile and animal emerges with the *Vue* ads. By equating automobility with the immanent ignition of animal life, the *Vue* discourse

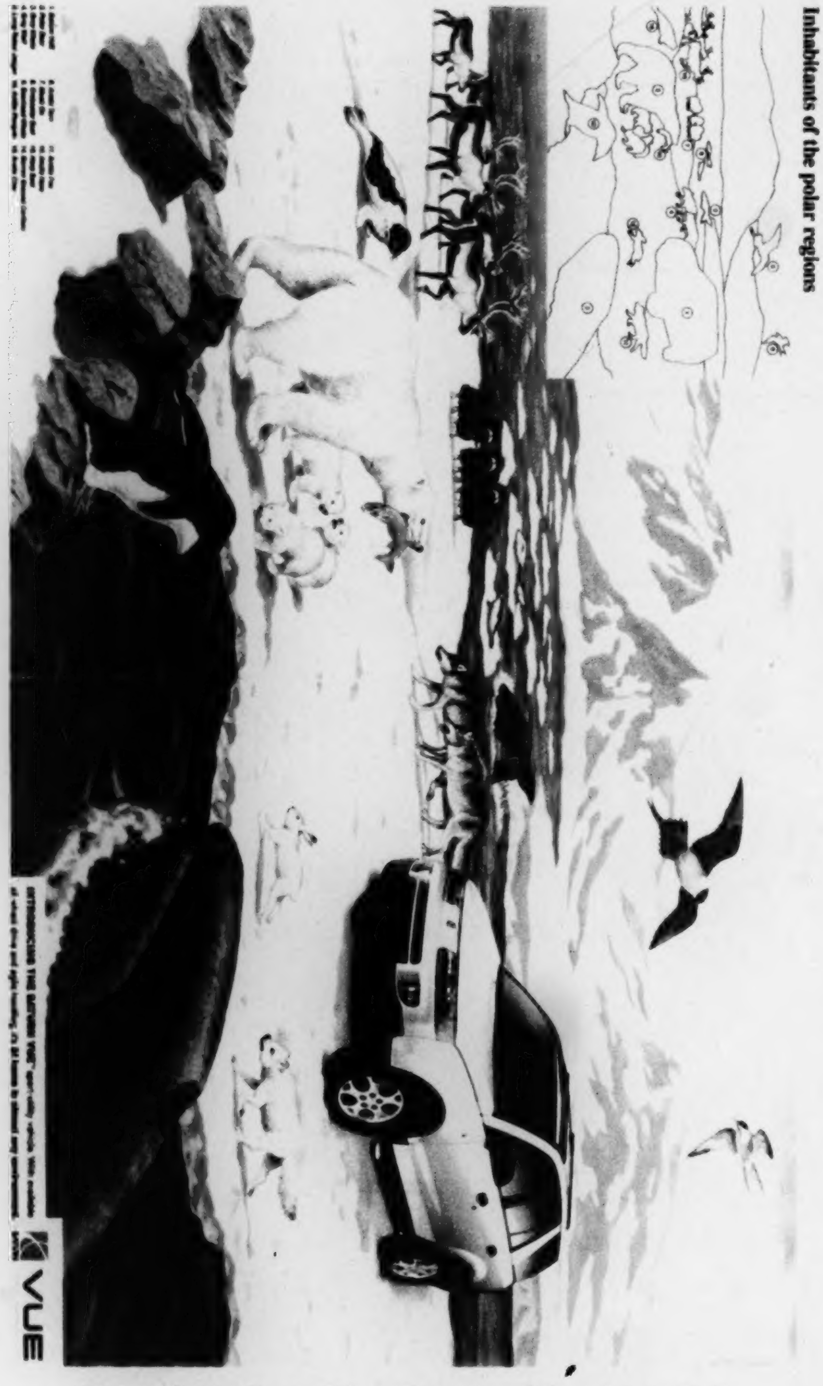
Inhabitants of the polar regions
VUE

Figure 4. "Inhabitants of the polar regions." (Reprinted with the permission of the General Motors Corporation).

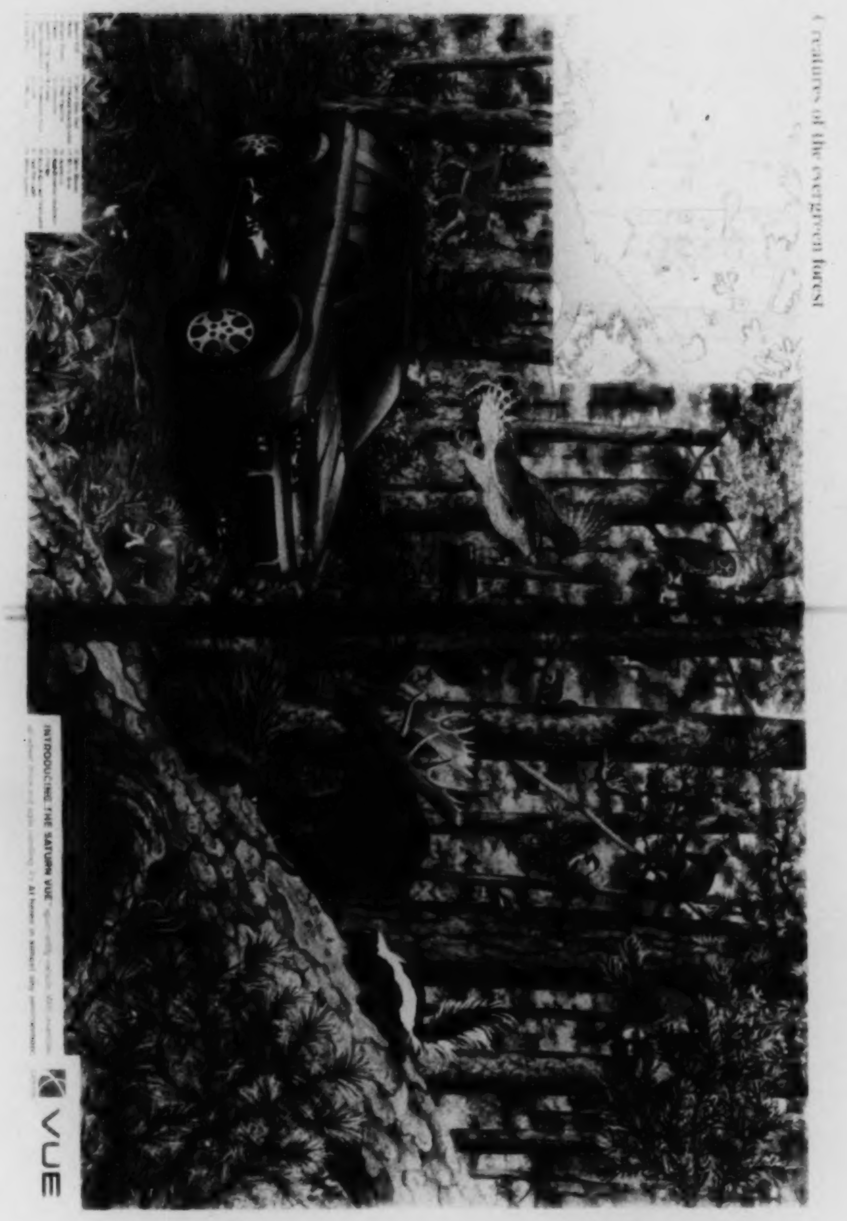
Creatures of the evergreen forest
INTRODUCING THE SATURN VUE
VUE

Figure 5. "Creatures of the evergreen forest." (Reprinted with the permission of the General Motors Corporation).

mythologizes the motive power of the Sport Utility Vehicle and conceals the economy of power regulating a carnivorously capitalistic relation of nature and culture.

Both of the *Vue* ads shown here are two-page spreads – a spatial sprawl reflective of the territorial largesse they promise SUV drivers. Organized as interactive educational tools, the first ad, "Inhabitants of the Polar Region," invites cross-referencing between three visual components: the illustrated animal panorama, the black and white numbered cut-outs on the upper left hand, and the taxonomic key of animal names on the lower left (see Figure 4). By cross-referencing all three, consumers are engaged in an interactive pedagogical exercise through which they learn to classify the *Vue* within an animal series. Corporate pedagogy teaches lessons in natural history to consumers of the twenty-first century. The aura of early childhood evoked by its pedagogical address underscores the strategy used by the ad to calibrate automobility's economy of power: *mimetic* management of the relation of nature and culture. After all, children, like animals and "primitives," have been constructed as natural mimics who learn by copying.[39]

The taxonomic system of classification mimicked by the ad acts like a synchronic cross-section of a state of nature, of naturally-occurring biodiversity. As a synchronic slice, the ad presents a timeless "still," a representative range of animal life outside of contingent historical forces such as human management, endangerment, or capitalization. The *Vue* is not depicted in motion, as a moving picture, but as a still life. If the ad puts time under suspension by inviting viewers to relive a primal, timeless schooling in mimetic identification, it also suspends motion. It is tempting to read this state of suspense as a mimetic rendition of the just-in-time economy of post-Fordist automobility, in which the synchronicity of animals tropes a simultaneity of conception and execution oddly resembling a static state. Indeed, it is tempting to read the ad as a mimetic mirror of post-Fordist production space, with its network of independent contractors, its self-directed teams, and its ostensibly uncoerced, rhizomatic schema of labour and nature. "Bioregion" and the ad's evocation of biodiversity might function, in this reading, as organic metaphors for the "networked organization," with different animal species representing its heterogeneous social and economic investments, or its "multiple stakeholders." It is equally tempting to read into the discourse of bioregion and the taxonomic list of animals indigenous to North America (with the *Vue* first on the list) the undertow of racist nationalism informing Saturn's visionary production of "automobiles designed, sourced, and assembled domestically" (Rubinstein and Kochan 3). However, there is cause to be wary of the mimetic desire for a mirror relation between copy and original, text and history, and of the promise of transparency attaching to the idea of mimesis as a mirror of economic reality. As I now turn to examine, what is at stake in the *Vue* ad isn't so much the rendering of an organic metaphor or mirror image of post-Fordism's networked economy, but the organization of mimesis itself.

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[39] As Taussig notes, "controlled mimesis is an essential component of socialization and discipline, and in our era of world history, in which colonialism has played a dominant role, mimesis is of a piece with primitivism" (*Mimesis* 219).

In rendering the *Vue* within a painterly diorama in which a sense of time and motion is at best naively suggested, the vehicle appears to be intent only on the mimetic movement of becoming like the animals around it. Yet what at first glance looks like a flat painterly plane upon which animals and automobile are rendered equal, on closer inspection can be seen to be a differentiated surface, reflecting different levels of mimetic fidelity. A close look at the lower left-hand corner of both ads reveals that the animal illustrations are signed by the hand of "K. Pendletton." The mimetic technology adequate to the representation of animal life, in other words, is the relatively rude naturalism of hand-drawn art. The *Vue*, on the other hand, asserts its difference through the enhanced mimetic technology it introduces into the visual ecology: the *Vue* is a computer-rendered image whose super-natural mimetic fidelity makes the hand-drawn images of the animals appear rough-hewn in comparison. The taxonomic discourse of species identity which equalizes the *Vue* and polar species is thus simultaneously disavowed by the ad's discriminating aesthetic. An "anthropological" order of mimetic progress cached in the ad actually demotes the wildlife among which the Vue claims to belong.

As with the RCA Victor logo analyzed by Taussig, the mimetic organization of the Vue ad invokes the commensurability of animal and machine fidelities while simultaneously asserting a difference which ultimately renders animal biology obsolete. The animals are demoted not just through the discrimination of a superior fidelity, but also by virtue of a discourse of time implied in the "evolution" of mimetic styles. The museological semiotics of the ad's diorama positions wildlife as a predecessor of the Vue, curatorially consigning all but the Saturn "animal" to a frozen past, even to extinction (that several of the animals listed on the taxonomic key are endangered predicts their imminent "pastness"). Despite the valorization of the animal as an organic metaphor of automobility, or rather because of it, animals are consigned to being "originals" necessarily predating, and never matching up to, their technological doubles. The anachronistic effect produced by the ad's imitation of a primary school textbook (i.e. a lesson in biological science) serves to reinforce the solo currency of the sport-utility body, whose cutting-edge verisimilitude projects it alone as a presence in the present. An evolutionary narrative of survival of the fittest is thus retooled along a trajectory of mimetic prowess. The *Vue* succeeds organic animals by virtue of its representational "liveness" (Simpson 93)[40] and by virtue of the anthropological discourse of time encoded in the succession of mimetic styles; there is what Johannes Fabian calls a "denial of coevalness" insinuated within what at first looks like a synchronic tableau of coexisting wild life (31).

The Sport Utility Vehicle, furthermore, performs its total autonomy: the Vue is de-linked from any visible historical operator. The SUV's powers of self-ignition detach it from reliance on exterior motives or production histories – there are no treadmarks showing the path from factory to wilderness. Yet the darkly tinted windshield at the same time makes it impossible to determine whether there isn't in fact a human inside the vehicle. As with Foucault's reading of Bentham's Panopticon, the inability to confirm either the presence or absence of a human operator introduces an aspect of surveillance into the scene which also contradicts the animal nature claimed by the Vue. If the Vue is immanent to the list of animals on the taxonomic key, its tinted windshields contradictorily hint at an invisible human presence – an imperial eye – overseeing the animal panorama. An eco-touristic gaze hides behind the windshield (and less subtly in the name "Vue") to locate the sovereign act of consumption within the capitalist ecology. The ad exquisitely allows that knowledge acquisition and economic buying power are the inextricable means of accessing nature.

No contradiction seems to trouble the discourse by which the Vue is represented as indigenous to two profoundly disparate bioregions at once: in a companion ad, different colour codings operate like molting coats allowing the Vue to coordinate with any environment. The now red Vue peacefully coexists alongside "creatures of the evergreen forest" (see Figure 5). In "Creatures of the Evergreen

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[40] Mark Simpson theorizes "liveness" as the semblance of life or "supposed immediacy" of the taxidermic specimen ("Immaculate Trophies" 93).

Forest," as in "Inhabitants of the Polar Region," the relation of automobility culture to animal nature is carefully ordered through a succession of rendering technologies (pictorial naturalism versus digital super-naturalism) and, by extension, between shades or grades of mimetic fidelity. However, the very mimetic differentials which work in the interests of capital are precisely those which run the danger of switching and slipping into antagonistic view. The mimetic structure of identification between capital and nature turns upon the discursive proximity of animal and automobile, a proximity which charges their articulation and calibrates differentials. Yet this very same proximity risks igniting confrontation rather than exchangeability, exposing incommensurable differences as opposed to productive and controlled "differentials."

Even as the Vue ads siphon enormous affective energy off their invocation of an ecological imaginary, then, they risk exposing the violence of automobility culture. Emblematic of the arbitrary violence marking material intersections of automobiles and animals is the roadkill. But automobility antagonizes animal worlds in countless ways: through gridlocks of roads and seismic lines which transect animal habitat, through unparalleled access to and therefore displacement of remote locations (the institution of "the wild" within national parks and nature sanctuaries historically performs the paradox of automobility, a technology of access which contaminates and displaces the pristine nature which is its ideological destination), and through the accidents (i.e. Exxon Valdez) as well as the normative everyday of fossil fuel culture. While the differentials controlling signs of identity and difference in the Vue ads work to mimetically manage such antagonistic histories of automobiles and animals, the ads cannot guarantee their ability to master the political volatility of the proximities they pose.

Conclusion

American stock market offices opened up and gathered momentum amidst the noise, stench, and animal traffic of Chicago's stockyards. For nearly a century, speculative and specie value - virtual and material capital - shared the common designation of "stock." By the 1970s, however (the period in which Fredric Jameson discerns the rise of postmodernity in, among other things, the soaring power of speculative, finance capital[41]), the animal trade at the Chicago stockyards was closed down. Animals were displaced as the too-literal, and faintly embarrassing, biological substance of the increasingly virtual sign of "stock." More and more remote from their animal connotations and correlates in material history, stock markets by the turn of the twenty-first century now appear to conduct sheerly ethereal global trades in fictitious capital.

In "Recollecting the Slaughterhouse," Dorothee Brantz traces the rise and "demise" of centralized public abattoirs in the west, both those founded in Chicago in 1865, and those built in Paris in the 1860s at the bidding of Baron Georges-Eugène Haussman. In Brantz's diagnosis, the "post-industrial age witnessed the demise of the modern mass-slaughterhouse because it did not fit into the image of the so-called postmodern city" (120). Just as the rubric of the "stock market" has become increasingly detached from its material links with carnal traffics in animal life, the postmodern city aestheticizes its industrial foundations. Since slaughter was evacuated from urban space in the early 1970s, "meat-market districts in New York and Chicago have been transformed into trendy hangout areas and loft neighborhoods, reinventing the slaughterhouse as an aestheticized space for consumption and entertainment" (122). Continues Brantz, "[j]ust last year, Les Abattoirs, a museum for contemporary art, opened in Toulouse, France, on the premises of a 19th-century slaughterhouse" (122).

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[41] See Jamesons's *Postmodernism, or, the Cultural Logic of Late Capitalism* (1992).

Among the more notable aesthetic rehabilitations of slaughter space traced by Brantz is Paris's La Villette abattoir, recently transformed into "a 'polyvalent cultural complex' which houses a science museum, festival space, and la Cité de la Musique" (123). Upon viewing an outdoor screening of a movie at the old abattoir, Brantz is especially struck by the superimposition of moving images upon premises formerly devoted to animal dis-assembly. "Watching the film projected onto the former cattle market…was an eerie experience," she writes (123). Trying to capture a sense of the radical cultural shift La Villette accommodates as its former traffic in animal life and death is supplanted by a spectral traffic in images and entertainment, Brantz declares that "[t]he park of La Villette is not just architecture turned against itself. It is life turned on its head" (123).

I have also theorized how the industrial space of slaughter is aesthetically displaced by films and automobiles, a displacement I have resisted by enlarging upon points where all three cultures of capital are aesthetically and materially contingent upon one another. In her recollection of the historical premises of postindustrial culture, Brantz inadvertently reinforces a hegemonic perception that a post-industrial traffic in images and entertainment is no longer a material matter of life and death, as opposed to the "deadly spectacle" and "carnivore feast" it spatially displaces (118). Through a cross-examination of the carnal composition of filmstock, the aesthetic consumption of slaughter, and the mimetic powers of automobiles, I've tried to complicate the perception that industrial space is material and post-industrial space immaterial, along with the attendant perception that industrial capitalism is, ergo, "history." Given the heightened immateriality effects surrounding the production and consumption of culture, the carnal composition of life in late capitalism more than ever needs to be actively "developed," in Brown's sense. Such an effect of immateriality is excited, among other things, by the Kodak corporation's 2004 announcement that it will be extricating itself from the material business of making film, in view of the digitization of image production. It is also an effect, as I've suggested elsewhere in this chapter, of a discourse of post-Fordism enabling the fantasy that automobiles instantaneously manifest in the space of just-in-time production.

Materialist critiques of capital's aesthetic signs of life urgently need to include, moreover, a material politics specific to animal signs. At the beginning of this chapter, I made the contention that critiques which have taken humans (and in the Marxian tradition, workers) to be the focal subjects of material history, leave a whole biopolitical terrain of animal signs and substances – massively productive for cultures of capital - unexamined. Any hegemonic organization of capital's human populations presupposes, arguably, a hegemonic organization of its animal populations. As James O'Connor puts it, in reverse terms, the "history of nature…is in some small or large part the history of labour" (*Natural Causes* 26).

In the time-motion economies of automobility culture which I've examined, the capitalization of labour is indeed intimately interwoven with the capitalization of nature, and vice versa. Fordizing and Taylorizing discourses intent on reducing workers to "the body part" best able to efficiently perform a piecemeal motion over and over again on the assembly or dis-assembly line presuppose, that is, the ordering of nature into homogeneous and uninterrupted flows of material (Brown, "Science Fiction" 136). Yet especially when this material is animal, such homogeneity is never absolute or guaranteed. As Vialles notes in the context of the abattoir:

> Job fragmentation is fully effective only in connection with material that is perfectly regular and always the same. Here, though, the regularity is only ever approximate; the suspended body retains traces of the unique life that once animated it: illnesses it may have had, accidents it may have suffered, various anomalies that may characterize it. The contingency and individuality of the biological sphere resist the formal rigour of technical organization. (51)

If automotive and meat-packing plants mark two sites where nature and labour have been most rigorously produced as parallel subjects of modern capitalism's time-motion economies, they also mark sites where "the contingency and individuality" of labouring bodies has continuously erupted in protest. Sit-down strikes in the 1930s, protesting speedups in automotive production line work, were devised in specific response to the logic of acceleration increasingly structuring the work (and play) of mass culture. The violence used to break sit-down strikes in order to keep the assembly or dis-assembly lines running gives glimpse into the associated networks of force required to feed a continuous stream of animal or other material onto the moving tracks of capital. The disciplining of autonomous or extraneous movements in capitalism's nature and labour has operated in productive contradiction, that is, with the aesthetic of social and cultural automobility perpetuated through the symbolic economies of car and cinema.

Yet if their subjection within the time-motion economies of capitalism suggests correspondences in the organization of labour and of nature, when it comes to developing material history as a history of protest, human labour and animal nature are incommensurable. Their incommensurability lies in the difference between human subjects of history whose protests are inscribed within the horizonal possibility of representational politics, and animal subjects whose protest at worst remains utterly unintelligible, and at best is mediated through a system of anthropocentric representations. Even more than the most unintelligible figures of human life and labour – subalterns[42] – animals suffer the double binds of representation: being absolutely excluded from a humanist symbolic on the grounds of species difference, or alternately, being anthropomorphically rendered within it.

The poststructuralist theory of Gilles Deleuze and Felix Guattari challenges the idea that the field of the social must necessarily be organized around a human "man-standard," and politics around representation (*Thousand* 291). Against the liberal hegemony of representational politics and its built-in assumption that there are pre-existing, ontologically coherent subjects awaiting representation, Deleuze and Guattari propose instead a micropolitical sociality teeming with signs that are by no means produced only by and for humans, but by and for nonhuman actors as well. They map "a whole micropolitics of the social field" in which it becomes possible to imagine signs of protest which escape the double bind of being either taken as representative of pre-constituted animal groups and species, or rendered unintelligible (7).

It is with this social field of minoritarian movements in view (versus majoritarian Histories serving to reproduce a man-standard), and within the possibility which such a view of the social opens for articulating animal signs capable of protesting the hegemony of cultures of capital, that I wind, finally, back to Bill Brown's theory of the "material unconscious." Brown contends, if you'll recall, that literary texts retain marks of a material everyday, seemingly irrelevant or excessive marks which constitute traces or tips of undeveloped histories. While such marks signal entry points into minoritarian histories suppressed by hegemonic accounts, they are at the mercy of future acts of attention which alone can enlarge and bring them to historicity.

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[42] Gayatri Chakravorty Spivak provoked sustained debate around the subaltern subject's ability to speak and to be heard within dominant systems of symbolic sense with her famous essay "Can the Subaltern Speak?" She repeats that question, with a difference, in *A Critique of Postcolonial Reason; Toward A History of the Vanishing Present* (1999). The subaltern's condition of incommunicability is a compound effect of hegemonic signs of class, race, and gender which, as rules of recognition, frame subjects' social intelligibility.

Gayatri Spivak suggests that the "physiological inscription" posed by Bhubaneswari Bhaduri (a young Indian woman who hanged herself in 1926), only becomes a "subaltern rewriting of the social text" in its "distanced decipherment by another" (*Critique* 307, 309). So, too, do animal signs of protest require "developers" if they are to achieve historical intelligibility in ways capable of disturbing the social fields of capitalism (Brown, *Material* 13). The seemingly incidental signs inscribed on animals bodies which Vialles notes, for instance - the marks of illness or accident testifying to their singular and everyday paths through the world – must be analytically produced if they are to score the abstract space of industrial slaughter and to protest the smooth operations through which animals' historical claim to life is violently suspended.

Signs of animal protest awaiting counter-hegemonic production are strewn all over the social texts of modernity, as yet unactivated links to repressed histories of capitalism. In his study of a Banff taxidermist by the name of Norman Luxton, for instance, Mark Simpson retrieves a letter in whose irritation is inadvertently etched the historical materiality of animal life which the taxidermist aims to put under suspension. In this case, the "physiological inscription" of animals' own rotting bodies protests the goal of producing animals as undying signs:

> In a letter dated 4 June 1910, John Ambrose, a taxidermic colleague of Luxton's working in Winnipeg, writes to express his outrage about the condition of a shipment that has recently arrived: 'I received the Sheep heads last Monday in a very bad condition, putrid, rotten and the majority full of maggots. It was a disgusting job to clean them and I think, they should not have been shipped in such a condition…'. (97)

More than the taxidermist bargained for, such a somatic assault is, as Simpson suggests, "one way in which flayed animals come to undo their butchers" (98).

Animal signs capable of protesting and competing with those metaphorically and materially rendered in service to cultures of capital are not found, then, but produced, as with Simpson's analytic production of affective protest out of the epistolary exchanges of taxidermists. In reckoning with unresolved discourses of modern capitalism, I've traced how animals have been produced as signs and substances pivotally, yet often unnoticeably, mediating mass culture. While I've developed a particular history of rendering around the triangulated economies of slaughter, cinema, and automobile, I can only point to the importance of also developing historical signs of animal protest. For the double rendering of animal life across metaphorical and material economies of capitalism has been, and is, under protest by animals who neither "live *unhistorically*" nor with the historical passivity hegemonically attributed to them (Lippit 68).

Industrial Mobility

Introduction

In the days and weeks following the September 11th, 2001 attack on New York's World Trade Center, it emerged as a minor news item that beneath the rubble lay a subterranean vault containing a stockpile of gold and silver bars.[1] Citizens were warned against opportunizing in a time of national crisis by attempting to loot the surprisingly anachronistic store of "hard" currency. The twin edifices of virtual finance, symbolic of global capitalism's cultural transcendence of terrestrial bondage, appear to have also acted as stakes marking the burial ground of material "specie" – or if not a site of burial, a ready cache where market forces were caught conservatively keeping the gold standard in literal reserve. The double currencies staked out by the twin towers – the abstract, hyperreal values responsive solely to the financial grammatology of a globalizing market, and the embodied, specie value of "filthy lucre" – signal capitalism's power to alternately transcend the substance of the sign of value and to hold it in reserve (Haraway, *Companion Species* 16).[2] Even as discourses of virtual finance aestheticize the transubstantial nature of global exchange, then, a literal stash of mineral wealth gives glimpse into their alternate clutch on the crude measure of "physical capital" (Seltzer 80).

The contradiction between the towering symbols of virtual finance and their reserve of carnal bullion gives glimpse into a "tension between credit and specie money" that I have been theorizing in terms of capital's double stock in animal life (Harvey 262). In this chapter, I will track the tension between speculative and specie value in the rendering of another currency crucial to cultures of capital: oil. As with its contradictory stock in animal life, the tension between the substance and the sign of oil is superbly productive for cultures of capital so long as it is mimetically managed in a relation of supplementarity rather than antagonism.

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[1] On September 22, 2001, CNN's on-line headline read "Buried Somewhere Under the World Trade Center rubble lies a fortune" (<http://www.cnn.com> November 4, 2001). Different reports cited that the $230 to $375 million in gold, silver, and other precious metals and gems belonging to the bullion and metals division of the Bank of Nova Scotia, had been stored in basement vaults on behalf of the New York Mercantile Exchange.

[2] As with Donna Haraway, I invoke the multiple connotations of "specie" as unhygienic substance of the sign: "I hear in species filthy lucre, specie, gold, shit, filth, wealth…Norman O. Brown taught me about the join of Marx and Freud in shit and gold, in primitive scat and civilized metal, in specie." (*The Companion Species Manifesto. Dogs, People, and Significant Otherness* 16).

The perceived relation of copy to original, signifier to signified, culture to nature, constitutes for Foucault an episteme which conditions constructions of value across the modern disciplines, for grammar as well as for political economy. In the modern age, as Foucault has noted, the sign of value is no longer identical to the value of the material substance which bears it.[3] Paper money exemplifies this split between substance and sign - its paper-thin body bespeaks the insignificance of the material carrier in its now servile function of facilitating transubstantial signs of exchange. Just as in Saussurian semiotics the substance of a sign is viewed as irrelevant to linguistic value, which is formally established in differential relation to a field of other signs, so by virtue of the sovereignty of exchange over use-value in market cultures, a commodity's value has little to do with its material body but is set in differential relation to other commodities. The sign of value becomes indifferent to the substance which carries it. In contrast to this "modern" mimetic episteme is an order which Foucault associates with "the Classical age," one revolving instead around the sacramental oneness of "flesh and figure," in Donna Haraway's words (*Companion Species* 32). In this sacramental "order of things," the mark of value corresponds to the material means of its exchange – the material coin physically substantiates the value it represents.

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[3] As Foucault claims, while in the Classical age "[a]ll wealth is *coinable*," in the Modern age "[m]oney does not draw its value from the material of which it is composed, but rather from its form" (*Order of Things* 175).

As Mark Seltzer notes, however, an ambivalent straddling of embodied and bodiless capital appears with the gold standard:

> If precious and 'hard' metals were also precious symbols of a medium of representation that looked like what it represented, and if paper money disturbingly represented what it didn't look like or feel like, these rival tendencies were also implicit in the double-entry system of 'the gold standard' itself (gold as value-intrinsic, the standard as value-systemic). (80)

The "black gold" of oil similarly juggles "rival tendencies" for capital: it embodies specie value but also transcends its materiality to become a speculative figure in fictitious markets. As both a bodiless cipher of market value and a substance literally fueling capital, oil is a "material signifier" simultaneously generating symbolic and economic capital (Emberley 4).[4] Oil is suspended in "a permanent tension between what Marx calls 'the financial system' (credit paper, fictitious capital, financial instruments of all kinds) and its 'monetary base' (until recently attached to some tangible commodity such as gold or silver)" (Harvey 107).

To bring a politics of rendering to bear upon the double currency of oil in cultures of capital therefore entails resisting two opposing theories of the mimetic relation between nature and culture, original and copy: firstly, one which understands mimesis as an organic relation of signs and referents (i.e. mimesis as mirror of nature), and secondly, one which perceives it as an economy of signifiers without "real" referentiality (i.e. mimesis as *simulacrum*). If the first fails to account for capital's performative power to construct the positivity of nature it references, the second aestheticizes culture as a bodiless, formal cast of differential signifiers, and fails to account for the ways that capital's discursive power is contingent upon a material world. Neither position does justice to the ways capital productively manages a "double-entry" system of mimetic power, pursuing an economy of floating signifiers with purely speculative value in productive contradiction with the material currency of its carnal stock (Seltzer 80).

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[4] Julia Emberley studies fur as a material signifier which mediates not only economic transactions, but symbolic and libidinal transactions of (neo-)colonial cultures of capital. Like fur, oil is a material signifier overdetermined by the multitude of economic and symbolic transactions it mediates.

The politics of rendering the double currency of oil for cultures of capital can be interrogated through what may at first appear a peripheral scene: the industrial mining of oil sands in Canada's north. I am compelled to analyze a scene of resource extraction in the Athabasca region of north-eastern Alberta not only because oil and gas constitute possibly the single most volatile political and material condition of possibility of market cultures and their sovereignty, but because in this specific instance oil interests have successfully diverted political volatility and social antagonism.[5] The Athabasca tar sands are touted as comprising "the world's largest known petroleum resource" (Petroleum Communication Foundation 4), with potential crude reserves surpassing those in Saudi Arabia ("potential" because the peculiar binding of oil and sand makes full recovery of its estimated 1.7 trillion barrels of oil as yet hypothetical).[6] Yet Canada's oil sands appear strangely remote from the geopolitical struggles over oil inflaming other parts of the globe. Antagonisms sustaining the visibility of the political economy and ecology of fossil fuels in the Middle East and South America - most recently through the 1991 Gulf War, the Bush regime's resisted occupation of Afghanistan and its 2003 attack on Iraq, and intensifications of oil-related strikes and kidnappings in Venezuela, Colombia, and other South American countries – rarely perturb the "domestic" productions of North America. The capital invested in Canada's oil sands might therefore be viewed as having successfully staked out a hegemonic social text, one in which transnational oil corporations constellate with potentially antagonistic Aboriginal communities, green social movements, provincial and federal governing bodies, and popular sites of public culture to secure a politically stable – if relatively expensive - source of synthetic crude for North America.[7] For these reasons, it is critical that the social text of oil sands development in Canada's north be aggravated, provoking the symbolic, economic, and ecological exploits of crude capital back into a field of political contestation.

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[5] As James O'Connor writes, "oil is the secret of the production of capital, value and surplus value, as well as the realization of value, and the circulation of capital in general" (*Natural Causes; Essays in Ecological Marxism* 215).

[6] In its 2000 publication *Canada's Oil Sands and Heavy Oil; Developing the World's Largest Petroleum Resource*, the Petroleum Communication Foundation estimates that 300 billion barrels of oil could potentially be recovered from the nearly 2 trillion in reserve (4).

In this chapter, I will antagonize the capital managed by Syncrude Canada Ltd., the most prominent consortium of transnationals mining the oil sands. If Syncrude is in actuality one of many "cardboard companies" with which global super-majors like ExxonMobil and Conoco Inc. assume a working façade, it is popularly perceived as a local hero (Pratt, *Tar Sands* 64).[8] According to information posted on Syncrude's website, the monolithic surface mining operations of the Athabasca oil sands "spread across an area about the size of Ireland," or approximately 42,300 square kilometres (<http:///www.syncrude.com> March 20, 2003). This analogy to the geographic mass of a nation-state split down the hyphen by unresolved colonial occupation and political violence is telling. As I will show, Syncrude's reputation as a model postcolonial corporation glosses over the ways it exploits the split nation-state geography of Canada while itself transcending unresolved antagonisms between Aboriginal and State interests in natural resource development.[9]

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[7] As Larry Pratt notes, the oil sands are attractive to oil super-majors in spite of the costs of developing them, for two reasons: the climate of political stability in Canada, and their importance as a domestic reserve which can relieve, if need be, the dependence of the U.S. on Middle East oil. Pratt links the rising interest in the oil sands in the 1970s to the "Project Independence which Richard Nixon announced in 1973 in reaction to the Arab oil boycott: 'The challenge facing the United States, he declared, was to regain the strength of self-sufficiency in energy'" (*The Tar Sands: Syncrude and the Politics of Oil* 49). China has since arisen as an increasingly prominent player in the oil sands, both in terms of capital investment and as a growing consumer of oil and gas.

[8] Exxon owns 69% of Imperial Oil, one of the largest shareholders in the Syncrude consortium. In its 2001 *Annual Report*, Syncrude reveals its function as an empty signifier covering for a consortium of transnational "Owners" when it states that "Syncrude does not generate revenues. Accordingly, Syncrude is not able to provide conventional financial statements" (34). Yet in the same report it perpetuates itself as a local personality: "...in a major poll of some 1,800 Alberta business executives, Syncrude was named the province's most respected corporation by *Alberta Venture Magazine*" (18).

Serious material and symbolic effects are at stake in Syncrude's articulation to local Aboriginal labour and culture, serving as it does to naturalize a neo-colonial economy of fossil fuel extraction and to excite an affective sense of the postcolonial conscience ostensibly guiding transnational resource developers such as Syncrude. With Syncrude, who incessantly recites through its public relations machinery that "Syncrude is the nation's largest industrial employer of Aboriginal people," transnational capital strategically inhabits a national discourse of postcoloniality (<http:///www.syncrude.com> March 23, 2003). The conscientiousnesss relayed by Syncrude through this mantra it feeds the media – supplying statistical proof of its ostensible difference and distance from colonial capital, institutions, and mentalities – is arguably itself a discursive ruse dissimulating the neo-colonial dynamics of oil sands "development." As Anne Mclintock notes, the rubric of the "post" in even the most self-reflexive postcolonial stance encodes an ideology of "linear progress" which relegates colonial power to the past and risks occluding how it persists in new forms, and through other means (13). Over the course of this chapter, I use the term "postcolonial" not to designate a body of literary and theoretical texts written "after" colonialism (nor the disciplinary study of these texts and their contested contexts), but rather to flag the popular sense, strategically inhabited by national and transnational powers, that neo-liberal market life at the turn of the twenty-first century is far removed from the practices of a colonial era. In enabling colonialism to be closed as a musty chapter of the past (rather than recognized as a shifting and chronic condition of global market cultures), the postcolonial discourse of a corporation such as Syncrude thus dissimulates its own economic and cultural imperialism in the present.

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[9] As Lisa Lowe and David Lloyd claim, "rather than passing by way of a fully articulated civil society, postmodern transnational capitalism exacerbates and intensifies the unevenness of various national states' transformations of colonial societies" (*The Politics of Culture Under the Shadow of Capital* 24). Importantly, however, the "differential" conditions transnational capital seeks to exploit can also open subversive possibilities: "But where transnational capital grasps hold of forms it might regard as 'backward,' brutally seizing on existent social forms rather than awaiting their transformation through the nation-state's modernizing projects, it precisely produces conditions for alternative practices that have not been homogenized by economic and political modernity within the postcolonial nation-state" (24).

Heavy industry rarely flickers into view on the digitized screens of twenty-first century global culture, yet I invoke it as the macro-physical double of capital's miniscule "sunshine" technologies, one that is arguably just as "hard to see" (Haraway, "Cyborg" 153).[10] In his early exposé of the powers controlling development of the oil sands, *The Tar Sands: Syncrude and the Politics of Oil,* Larry Pratt writes, "[i]n the tar sands everything seems to happen on a giant scale" (15).

> The very nature of the resource demands gigantism. Forcing the asphalt-like sands to surrender their thick, sticky oil and then transforming that oil to a marketable product is an expensive and appallingly dirty business involving large-scale technology, some borrowed from coal strip mining and oil refining and some invented especially for the tar sands. To be economically viable the process demands large economies of scale: everything, from removal of the muskeg and overburden to extraction and processing of the oil, must be done on a Brobdingnagian scale. (15-6)

With the bulk of the tar sands buried far below the surface, mining operations gouge out pits several kilometres wide and hundreds of metres deep, minting new intensities of extraction which Syncrude announces as "records": "More than one million tons per day of oil sand and overburden materials were moved in 2001, which is a new record" (<http:///www.syncrude.com> April 4, 2003). Headlines from Syncrude's on-line news archive similarly valorize the scale of production - "81.4 Million Barrels in 2001: Syncrude sets a new production record" - and of its heavy machinery -"World's largest haul truck, the CAT 797" (Ibid). Suncor Energy Ltd., the first corporation to undertake economy-of-scale mining in 1967, is second only to Syncrude in the current scope of its operations. In a speech delivered upon the 2002 opening of a multi-billion dollar upgrader christened "Project Millenium," a Suncor executive condensed the discourse of scale to a string of numerical values: "Twenty-one million job hours; three million engineering hours; one hundred and fifty thousand cubic metres of concrete; nine million feet of cable; four hundred and twenty-four vessels, tanks and piperacks" (<http://www.suncor.com> April 5, 2003). Suncor's string of staggering yet precisely calculable expenditures suggests that economy-of-scale industry, rather than disappearing with the advent of post-industrial information economies, intensifies as their material double or supplement.

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[10] Donna Haraway states: "Our best machines are made of sunshine; they are all light and clean because they are nothing but signals, electromagnetic waves, a section of the spectrum" ("A Cyborg Manifesto" 153). She adds, "[t]hey are as hard to see politically as materially" (153). Yet if minisculism attains one kind of material and political invisibility, the gigantism of capitalism's industrial inscriptions strangely attains another. The inability to perceptually assimilate the scale of industrial mega-projects such as the oil sands might be compared to the inassimilability of global capitalism theorized by Fredric Jameson, that is, to the difficulty of comprehending "a system so vast that it cannot be encompassed by the natural and historically developed categories of perception with which human beings normally orient themselves" (*The Geopolitical Aesthetic: Cinema and Space in the World System* 2).

For tour-goers guided through the "biologically barren landscape" of northern Alberta's transnational territory – like Swift's Gulliver passing through the land of the Brobdingnagians or Carroll's Alice stepping through the looking glass into the nonsensical dimensions of Wonderland – somatic disorientations caused by its gargantuan economy-of-scale are organized so as to excite adventure rather than political agitation (Pratt, *Tar Sands* 16).[11] Capital at the site of the oil sands produces an experience of anthropological wonder at the nature of the "mimetic faculty" itself (the ability to reproduce anatomical models of the life-size to an almost unfathomable scale), a wonder which potentially blinds tour-goers to the historically interested culture of capital motivating it (Taussig xiii). What the Oil Sands Discovery Centre in the city of Fort McMurray heralds as "the oil sands experience" can be read as a web of discourses producing magical misrecognition in the face of what is a *political faculty* for manipulating mimetic effects of gigantism and miniaturization, depths and surfaces, historicity and a-historicity, so as to manage the sense of capital.

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[11] In 1976, when Suncor Energy Ltd. (then called the Great Canadian Oil Sands) had the only large stake in the oil sands and Syncrude was just initiating its operations, Larry Pratt already described the mined land in these terms. In 2003, with dozens of leases to oil and gas super-majors, Richard Thomas, an environmentalist writing for the Alberta Wilderness Association, echoes Pratt's ecological description. Deconstructing what he calls the "Orwellian" terminology of the Alberta Energy Department (which ironically uses the term "resource sterilization" for any part of the oil sands placed off-limits to mining), Thomas declares that "oil sands technology (heat, solvents, steam) actually *does* sterilize the land" (*Wild Lands Advocate* 10).

Industrial hardware literally reducing nature to raw material – colossal draglines, CAT haul trucks and diggers, conveyor belts, steam injectors and cyclone towers – thus arguably also functions to manufacture a metaphysics of mimesis itself. The literal and figurative effects of capital's dual-functioning technologies vie for the attention of tour-goers as they are bused through a mimetic wonderland whose distensions come to persuasively signify phenomenal rather than political power. A scale of industrial expenditure specific to the reproduction of capital thus passes as a de-historicized anthropological wonder analogous to the Egyptian pyramids (oil sands developers are fond of calling the oil sands the eighth wonder of the world). In a tribute to just one of its many gigantic draglines, nicknamed *Discovery*, Syncrude states:

> *Discovery* began production in 1977, and by the time it was retired in July 1999, it had recorded over 105,000 operating hours and mined over 624 million tons of oil sand. That's over 6,500 tons per hour, 24 hours per day! *Discovery* moved one-third more material than was moved for the construction of the Panama Canal, or enough material to construct three Trans-Canada highways from the East Coast to the West Coast.[12]

The wondrous feats and scale of oil sands capital canonize it, like the Panama Canal or the Trans-Canada highway, among the world's great tourist attractions. Indeed one of the "Smithsonian Journeys" offered by the Smithsonian Institute in Washington is a "Northern Lights of Canada" tour, pitched on its website as follows: "Venture to Fort McMurray, a city that lies within the southern portion of the zone of maximum auroral occurrence" (<http://www.smithsonianjourneys.org> April 22, 2003). In addition to viewing the northern lights through the pedagogical filter supplied by a professor from the University of Alberta, the study trip promises a tour of the Oil Sands Discovery Centre, a visit to a "traditional" native community in the Wood Buffalo region, and an afternoon snaring wild animals. Like oil sands discourses themselves, the Smithsonian journey articulates extraction capital, native culture, and nature as compatible studies, thematically linked by the itinerary of the tour. That the Smithsonian Institute can schedule the spectacle of oil sands mining next to the spectacle of the Aurora Borealis (or perhaps in part *because* the Smithsonian's study tours render nature's and capital's mega-projects commensurate) is a measure of the success with which the economy-of-scale mining of the oil sands articulates an aesthetic of the industrial sublime.

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[12] Text from an outdoor plaque at Syncrude's "Giants of Mining" exhibit, the second stop on the field tour of its oil sands operations.

In what follows, I will track the path circumscribed by Syncrude's own guided tour of the oil sands. Like the one offered by the Smithsonian, the Syncrude tour threads together oil sands capital, signs of Aboriginality, and animal signs in a metaphorical loop which I argue serves to mimetically manage the denatured nature and racialized labour of oil sands capital. Along the way, I will critically stall the tour's mimetic routine to problematize how Syncrude aestheticizes its industrial installations by heavily planting them with signs of Aboriginal and animal life. In even in referring to its series of massive open pit mines as "installations," Syncrude establishes a mimetic resonance between economic and aesthetic space which contours the consumption of the animal and Aboriginal signs on its tour. As the conspicuous sponsor of the permanent Syncrude Gallery of Aboriginal Culture at the Provincial Museum of Alberta, Syncrude even more specifically pursues what Mark Seltzer terms a "*logic of equivalence*" between the space of industrial extraction and that of cultural preservation (51). On the one hand, such a logic of equivalence serves to aestheticize heavy industry by articulating oil sands capital to a museological site of culture and to the promotion of the arts. Conversely, museum space and cultural events get branded with the private, proper name of resource capitalism in exchange for funding.[13] By giving "Syncrude" symbolic title over Aboriginal culture in the name of its permanent gallery, the provincial museum allows for a mimetic resonance between the contents of its gallery space and the industrial resource, one which holds ideological implications beyond those attending the corporate sponshorship of public culture. For by allowing its interest in preserving Aboriginal culture to be affiliated with the capital invested in mining the sedimentary subsurface of Canada's north, the museum risks repeating the colonial politics of collecting native life under the sign of raw nature rather than culture. Affixing the proper name of an oil sands capital to its gallery space produces a dangerous equivalence, that is, between the Aboriginal artifacts which constitute the museum gallery's aesthetic object (some dating as far back as the Ice Age), and the geological deposit which constitutes Syncrude's economic object.

While only 6,000 or so people take Syncrude's tour of its industrial operations each year, as compared with the million who annually visit the Provincial Museum of Alberta, the field tour of its oil sands operations nevertheless marks a nodal point within the powerful social text which Syncrude knits together across economic and aesthetic space.[14] The field tour is one of the biopolitical means through which the capital consolidated in Syncrude invests in more than just economic modes of production and returns, and commits to the more holistic "production of social life itself," as Hardt and Negri put it (xiii). In its investments in a more pervasive biopolitical constitution of social life, "the economic, the political, and the cultural increasingly overlap and invest one another" (xiii). In the case of Syncrude, industrial technologies for extracting and processing sticky crude combine with aesthetic technologies such as sponsorship, advertising, mascotry, and guided tours, to constitute oil sands capital as a producer of social and cultural life as well as an economic force.

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[13] Syncrude articulates itself to "the arts" not only through conspicuous sponsorship of the provincial museum's gallery of Aboriginal culture, but through sponsorship of alternative cultural events such as the annual Syncrude NeXt Generation Arts Festival. The corporation is also praised over the air waves as a "generous donor" to Alberta's public radio station (CKUA), grafting itself onto yet another agency of public culture.

When Syncrude's industrial modes of production are understood to be supplemented by aesthetic technologies (and vice versa) within a biopolitical economy of power, its field tour can be read as one symptom of the profound "incorporation of observing or supervising…into the process of making or producing itself," rather than solely as a promotional afterthought or extra (Seltzer 41). The possibility of incorporating an aesthetic logic into economic space via touring is arguably already articulated in and through the industrial installation, rather than tacked onto the resource zone as a public relations postscript; the oil sands' very modes of production are aesthetic at the same time as they are economic. Syncrude's "Aurora" installation, for instance, constructs itself in terms of a spectacular, fleeting light show (as environmental performance art) *and* as industrial site.

The rubric of the "installation" refers me back to the title of this chapter, "Industrial Mobility," where I first intimate that a sense of lightweight mobility is one of the aesthetic effects pursued by resource capitals such as Syncrude. The suggestion of mobility evoked by the rhetoric of the installation endows industrial capital with something of a post-industrial aura, de-materializing its terrestrial conditions and irreparable effects. Industrial hardware comes to resemble software through the mimetics of the "installation," as capital creates its conditions and effects in the image of a computer disc which can be inserted into and ejected from hyperreal space. Through the connotations of the installation, the ecological event of industrial capital is billed as temporary rather than as interminable – earth is opened up and closed again like a gallery hosting a travelling exhibit. Disavowing extraction capital's violent fixation upon the materiality of place, the installation invites instead a vision of "ideal capital" as "a pool of money (or money capital) ready and able to move to wherever new technologies, scientific technological resources, natural resources, cheap labor, and expanding markets beckon" (O'Connor 318).

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[14] According to its 2001 *Annual Report*, "Syncrude continues to build public support and recognition through the oil sands most popular tour program, which last year hosted more than 6,000 visitors" (18). Suncor Energy Ltd. offers a similar tour of the oil sands.

Thus by virtue of the double logic of rendering, oil sands capital stitches a technological aesthetic onto the material theatre of place and begins to generate both economic and symbolic returns. Though the social and material effects of Syncrude's mining installations will have interminable seepage, the guided tour of its industrial complex captures an aesthetic image of capital as a serial instalment hosted by global space. Nor is Syncrude alone in calling its mining complexes "installations" - the term enjoys standard usage in discourses of resource capitalism. Across the late nineteenth and twentieth centuries in North America, (as I have already suggested in my reading of slaughterhouse tours in "Automobility"), the worksites and earthworks of industrial capital supplement museological space as popular sites of aesthetic production and consumption. Tour-goers help to consolidate the aesthetics of industrial capital by consuming the gash of extraction as a sublime experience, exciting wonder. Tour-goers are, indeed, integral to the ability of industrial capital to render aesthetic returns from economic space.

Inside Syncrude's tour of its industrial installation, a particularly loaded animal sign is deployed to mimetically mediate oil sands capital. "Noble wood bison" are a talismanic exhibit in the social text of the oil sands (Syncrude, *Aboriginal Review* 2002). Sculptural representations and live specimens are strategically installed at pivotal points along the oil sands tour. Bison also signify prominently as visuals in Syncrude's annual *Aboriginal Review*, in its on-line image library, in its environmental reclamation discourses, and in a mountain of public relations material which articulates oil sands capital to all that is native to the Wood Buffalo region in which Syncrude operates. I will theorize how wood bison function, in effect, as Syncrude's unofficial corporate mascot, and how *mascotry* constitutes a mode of mimetic power enabling Syncrude to naturalize the denatured nature and racialized labour of neo-colonial capitalism.

"Mere Jelly"

I forestall "taking" the Syncrude tour, momentarily, in order to first relate the specific social text of the oil sands to a broader logic of "rendering," that is, to the double traffic in the sign of nature as de-materialized signifier *and* as "mere jelly" in cultures of capital. I recall Thomas Keenan's translation of the passage, in Marx's *Capital*, of the "mere jelly [*Gallert*] of undifferentiated human labor" which constitutes the abstract axis of equivalence or exchangeability between different things (168). Whether one reads "mere jelly" as the substance of the sign of labour within the relations of capitalism, or as the substance of the sign of humanism (as Keenan does in his analysis of the passage), Marx's evocation of the abstract viscerality of capitalist exchange resonates closely with the rendered material which I theorized in relation to cultures of automobility in my last chapter (i.e. gelatin). In this instance, it is in the production of crude oil that I track the "mere jelly" of cultures of capital - the substance of the sign of exchange.

Marx's description of the material measure of exchangeability as "mere jelly" – what might seem to be a figure of primal matter, or of the "raw" – hints that rather than an irreducible unit of matter, raw material is a visceral cipher of exchange-value.[15] Marx's words open up the possibility of reading "mere jelly" as a cultural rather than natural sign, and indeed as a material sign specific to cultures of capital. It is in its very amorphous homogeneity and "mereness" that the substance evoked by Marx reveals its cultural rather than natural character. Just as I've argued that the rendering industry has a specific, political character under cultures of capital, so I want to elaborate upon Marx's words to suggest that the figure of "raw" material which circulates with empirical positivity within cultures of capital is not in fact naturally given, but the product of their peculiar cultural logic. Raw material – rather than a pre-existent, "natural" resource – calls to be theorized as a sign manufactured through an ensemble of physical and rhetorical technologies.

Tremendous labour is required to reduce heterogeneous nature to a homogeneous substance mediating cultures of capital. The industrial cities and space-age technologies stationed over the oil sands – the investments of machinery, or in Marx's terms, of "objectified labour" in the manufacture of raw material (*Selected* 374) – are an indication of the force required to produce nature in the raw. Syncrude's most advanced method of loosening oil from the sand that binds it involves injecting steam deep into the geological substrata, with enough heat and force not only to separate oil from sand, but to permanently sterilize the land. Earlier oil sands speculators also eager to release nuclear rates of surplus for capital even proposed detonating an atomic device deep inside the tar sands deposit.[16] The fixed capital labouring to pry oil loose of the sand which binds it thus gives the lie to the empirical discourse which presents raw material as naturally given. The mere jelly produced at the site of the oil sands is, furthermore, a rigidly regulated subject: forcibly isolated out from its heterogeneous lodgings, the crude wrested from the oil sands is trained through pipes and vessels equipped with sensory monitors which scrutinize, gauge, weigh, sort, and watch for leaks or irregularities. In short, raw material is one of capital's most radically routed, reduced, and disciplined "subjects."[17]

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[15] See Judith Butler's feminist deconstruction of the seemingly irreducible category of "matter" itself in *Bodies That Matter: On the Discursive Limits of 'Sex'* (1993). Butler resists "taking materiality as an irreducible" and discerns "a gendered matrix…at work in the constitution of materiality" (32).

Yet the oil sands have also long frustrated their reduction to "mere jelly" for capital. A discourse of the resistant resource has run through the oil sands text since the "strange bituminous substance" first captured the interests of European explorers (Fitzgerald 15).

> In 1719, Henry Kelsey, a Hudson's Bay Company fur trader at York Factory on the western shore of Hudson Bay, wrote in his journal that a Cree named Wa-Pa-Sun had brought him a sample 'of that gum or pitch that flows out of the banks of the river'. This is the first written reference to the oil sands of Western Canada. By the late 18th century, European explorers were sending back first-hand accounts of the bitumen seeps along the Athabasca (Canadian Petroleum Foundation 8).[18]

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[16] As J. Joseph Fitzgerald notes in *Black Gold With Grit*, in the late 1950s the notion of detonating a nuclear device to free up bitumen buried at depths beyond the reach of open pit mining was under serious consideration (112). Nuclear heat would separate the oil from the sands so that it could be pumped to the surface.

[17] The tour guide mentions that hydrotransport pipes are slowly replacing the massive conveyor belts which used to transport bitumen. In x-raying pipes on a regular basis, a medical discourse of biological examination is extended to raw material, which itself becomes a subject of biopolitical surveillance.

[18] This history of discovery is recited through several pro-petroleum venues, including the Oil Sands Discovery Centre in Fort McMurray. While the narrative acknowledges the dependence of oil sands capital (like fur trade capital before it) upon native informants/knowledges, this debt is relegated to the distant past and ultimately reversed as corporations such as Syncrude depict themselves as benefactors bringing economic development to Aboriginal communities.

In his book *Peter Pond, Fur Trader and Adventurer* (1930), Harold Innis remarks that Pond, making his way along the Clearwater River in 1778 in search of a last frontier for the fur trade, noticed the jelly-like substance "oozing" out of the river's sandy banks (125).[19] Alexander Mackenzie, arriving in the wake of Pond, similarly sent news back to the North West Company of "veins of the same bituminous quality" in the sandy banks where the Clearwater and the Athabasca rivers converge, now the site of Fort McMurray (qtd. in Fitzgerald, 17). Pond, who christened the Athabasca area the "El Dorado" of the fur trade, helped the North West Company make a fortune off of the region. Yet the dwindling supply of animal pelts compelling both Pond and Mackenzie's ventures further west signals that the monopoly capitalism of the North West and Hudson's Bay Companies was on the look-out for another trade staple. Although Cree, Chipewyan, and Beaver First Peoples had a long history of using the sticky sands for its medicinal properties and as a caulk for repairing and waterproofing canoes, it remained an incalculable "substance" in the discourse of explorers until its value for capital could be formulated.[20] The oozing bitumen had yet to be symbolically transvalued and mimetically managed according to the differential opened up between use-value and exchange-value, a founding condition of capitalism. At the same time, its designation as a mere "substance" already projected the promise of its abstract exchangeability upon it. The "made-beaver" constituting the material currency of the fur trade would eventually be replaced by the "black gold" of the Athabasca river basin – which as yet, however, registered in the explorers' discourse as an unknown quantity.

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[19] Pond's account was written in French: "Ce qu'il y a certain c'est que le long des bords de cette riviere et du Lac Arabosca on trouve des sources de bitumen qui coulent sur la terre" (qtd. in Innis, 125).

[20] On the Syncrude tour, the guide maintains the past tense when she recites that Cree, Chipewyan and Beaver First Peoples "knew about the oil sands." First Peoples' knowledge of the oil sands is relegated to the past, insinuating that true knowledge of the oil sands begins at the moment when it ceases as use-value and is measured in terms of exchange-value (that is, when white Euro-American capitalism supplants aboriginal economies). J. Joseph Fitzgerald even more insidiously writes that the oil sands were "unknown to man until 255 years ago," that is, when they first came to the attention of white explorers. While the Hudson's Bay Company used tar from the sands to waterproof and repair canoes on its fur trading expeditions – finding in it the same use-value that natives had for centuries – "it would be one hundred and twenty-five years before the true character of the oil sands deposit was fully understood" (Fitzgerald 17).

In 1875, scientists with the Geological Survey of Canada pursued misguided rumours of "pools of oil" beneath the surface ooze, but upon drilling failed to locate liquid deposits of conventional oil. In 1906, Count von Hammerstein drilled 24 wells only to hit salt. Salt was capitalized upon for the next 50 years in lieu of the more tantalizing oil. In 1915 an engineer with the federal Department of Mines, Sidney Ells, arrived with an expert chemist, Dr. Karl Clark, to pioneer an application of the first "hot water extraction system" – the basis of the steam extraction technology currently used for *in situ* recovery of crude oil. Dr. Clark's ingenuity nevertheless achieved only limited success in steaming the heavy oil loose from its sandy moorings. A string of entrepreneurs applied themselves to the challenge over the first half of the twentieth century.[21] The resource which obdurately refused to yield up its invaginated wealth for capital was administered ever stronger doses of extraction technology by a succession of white male capitalists. Today, Syncrude pumps millions of dollars into technology research in the hopes of fully translating the non-compliant "substance" into symbolic sense and exchange-value for capital. The discourse of the resistant resource which runs through the historic oil sands text willfully misrecognizes the violence of contracting nature as a literal, homogeneous presence for capital; indeed, it excites a narrative of sexual conquest which heteronormativizes the production of raw material.

Contradictory material and aesthetic technologies of rendering pursue a double discourse of capital, representing exchange as transcendent of its earthly conditions while complicitly stepping up the intensity with which capital violently visits the literal upon nature. Far from tapering off, extracting the visceral jelly of exchangeability from the earth in the form of raw material intensifies in disavowed relation to the heightened aesthetics of finance capital, particularly in relation to the communicative immediacies promised by its information economies. Advanced capitalism arguably only exacerbates the complicity – the "ruse of disavowal" (Spivak, *Critique* 13) – within the double logic of rendering. The "financialization of the globe" emblematized by the gravity-defying twin towers disavows capitalism's terrestrial underpinnings precisely to capitalize off of the difference between de-materialized exchange-values and violently literal assignations (Spivak 3).

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[21] I paraphrase the history of the oil sands as narrated through videos and printed material at the Oil Sands Discovery Centre in Fort McMurray.

Cultural studies play a part in discursively bracketing primary production (i.e. the production of raw material) off from late capitalism by periodizing it in alignment with an outmoded industrial age, that is, in alignment with a stage of capitalist activity now relegated to the past or to the "South" as the global North pronounces itself post-industrial. Yet as the case of the oil sands will hopefully illustrate, demoting primary production to the past – a temporal displacement which gets spatially transposed onto so-called developing countries – allows western cultures of capital to disavow their intensifying production and consumption of material resources. Capital traverses a global geopolitic, installing its industrial complexes where colonial powers once seized nature and labour as "free" (and where neo-colonial powers continue to seize it as ridiculously cheap), magnetically attracted to the native North in Canada and the immigrant South in U.S. inner cities, as well as to the dubiously decolonized "Third" world. Industrial capital increasingly installs itself, that is, in spaces encoded, through discourses such as "the developing world," as existing in a time that is never equivalent to the present. The technological succession to informational modes of production and consumption notated by the term "post-industrial" (positioning industry as transcended in the succession to information) implicitly notates a refusal of the coevalness of industrial and post-industrial capital.[22] The denial of *this* coevalness allows for an ontologizing of the difference between "developing" and "advanced" regions of the globe, with the former consigned to a time that is never contemporary, in this case the time of primary production. In this schema, the global South (whether it be the so-called developing world or immigrant and indigenous communities resident in the so-called developed world) supplies the "substance" of the North's signs, the raw material of culture, while itself never considered a cultural contemporary. A politics of rendering which analyzes the sign of raw material in cultures of capital cannot avoid also critically reflecting, then, upon what Richard Heyman calls "the social production of 'postindustrialism'" ("Postindustrial Park…" 112).

Consuming Economic Space: the Industrial Tour

Our guide, sitting in the front seat of the bus and holding a microphone in one hand, tells us that the bus we're on is the same one which transports employees from the city of Fort McMurray out to the Syncrude site each morning. Tourists mimetically inhabit the seats of labourers, and labourers the seats of tourists, on a bus which alternately mediates work and play. Yet we tour-goers will be periodically let off the bus at interpretive stages along the route, to peruse displays and study plaques. The planned stops effect a sense of movement and agency – an assurance that unlike Syncrude's employees we are not being herded to work, but to play.

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[22] I borrow the term "coeval" from Johannes Fabian's *Time and the Other: How Anthropology Makes its Object,* where he theorizes the chronopolitics of locating the Other of anthropological study in a time that is never equivalent to the present (31).

The identity and difference of employee and tourist, mine and museum, of work and play, enact multiple social differentials which compound the mimetic tension - the interest - of the tour. Diastolic conflations and disavowals mark oil sands discourses, which at one moment construct the identity – and the next moment, the difference - of industrial and wilderness park, machine and animal, the capitalization and conservation of nature. This compact of profitable but also potentially volatile identities and differentials comprises the contrary social text of the oil sands.

As the bus pulls out from The Oil Sands Discovery Centre in Fort McMurray, the tour officially begins; the reel of the guide's narrative methodically unspools as the bus picks up speed, a voice-over syncopating a moving picture turned by the wheels of the bus. Who are we? How did we get here? To even arrive at the starting point of the tour we have had to consume massive distances, assume mobile capabilities, and drive mobile capital – Fort McMurray is a remote city. The tour recites our hegemonic pretext as "the great white male north" sought by Peter Pond and Sir Alexander MacKenzie, one made fictionally infamous by Jack London (Seltzer 167). We pilgrimage in the trail of white male explorers, fur traders, and twentieth-century fortune hunters like J. Joseph Fitzgerald, who in *Black Gold With Grit* writes: "For many Canadians, the frontier has been the vast frozen north…. Whatever it may really have been, in terms of cold, raw winds, detached and lonely campsites and roadless muskeg, for me it was the stuff of Jack London and Robert Service" (xiv). Fitzgerald describes the city of Fort McMurray in the 1950s as "frontier living at its most raucous" (xv). Retracing the paths of white fur traders and mineral prospectors, tour-goers come to recreate what Hugh Brody calls "the northward progress of the energy frontier" (128).

Yet sitting on the bus, there is a premonition that the raw event will recede behind an infinite horizon of mimetic effects, that an experience of the virile real of the great white male north will remain the ever-receding bait of the tour. The city of Fort McMurray, if tinged with frontier raucousness, is less than spectacular. Our guide tells us that its population is notoriously hard to gauge by census because so much of it is in continuous transit. Canada's unemployed are drawn like a magnet to the employment surplus promised by the oil sands; Syncrude and Suncor draw heavily from surrounding Aboriginal communities with congenitally high unemployment rates. The city of Fort McMurray is itself a mimetic effect, a performance of civic permanence when in fact it is largely a condition and effect of oil sands capital rabid to tap a non-renewable resource in quick-time. Prior to the oil sands boom it was a condition and effect of the traffic in fur – a colonial trading post. The city is in this sense a "model" and "remodel" of transnational capital.

The predominantly male populations which supply the labour for oil sands capital take up residence in corporate "camps," mass temporary housing. Just as tour-goers playfully sit in as employees for the duration of the tour, so the Suncor corporation conversely invokes the recreational space of an alpine resort in naming its workers camp "Borealis Lodge," home to approximately 2000 employees. These camps, packed with non-unionized, itinerant male labourers, service all of the masculinisms of frontier living. A thriving drug trade accompanies high-wage, usually short-term work in a remote locale. The large "in-migration" of male labourers is accompanied by increased alcohol consumption, prostitution, and violence against women, particularly native women (*Aboriginal Peoples and Mining in Canada* 11). The Syncrude-employed guide calls the thousands of camp residents a "shadow population," always turning over. Yet under the auspices of "Borealis Lodge," the temporary labour of working in the oil sands is aesthetically framed as the magical space and time of recreation.

Rolling past Borealis Lodge, the bus moves in time with the guide's rote commentary along the only road heading north, a private highway constructed for the capitalist mega-projects toward which tour-goers are trundled. Not just civic markers, but provincial and federal signposts are overwritten at the gateway welcoming visitors to transnational territory: "Wood Bison Gate." This is the first of four carefully staged interpretive stops – including the "Giants of Mining Exhibit," "Chrétien's Point," and "Wood Bison Viewpoint" – at which the moving picture of the tour is put on pause while tour-goers disembark, stroll around reading interpretive signage, looking at displays, and vainly attempting to "take in" glimpses of an industrial landscape so massive it permits only partial registration.

First Stop: "Wood Bison Gate"

The landscape architects hired to design the four interpretative stops on Syncrude's tour describe it as a "specially themed portion of Highway 63" along which unfolds "a 'visitor storyline'."[23] Yet the storyline begins, strategically, with the end of extraction capital, that is, with the presentation of an environmentally-reclaimed mine site. As will emerge, the discourse of reclamation with which the tour begins is framed as the fulfillment of Syncrude's promise to First Peoples in the region to return the land to a "healthy" state, a gesture emblazoned upon rock at the first stop on the tour with the words "A Promise Written in Stone." Not only will the tour begin and end with Syncrude's reclamation discourse (inscribing the industrial ecology of oil sands capital as a foreclosed narrative loop), the promise of environmental reclamation will be mediated at both the first and last stop on the tour by a charged animal sign: endangered wood bison. At the first stop on the tour, "Wood Bison Gate," and at the last stop, "Wood Bison Viewpoint," sculptural renditions and live specimens seal Syncrude's promise to restore nature to a native state. Given the resonance between the bison signs exhibited at the first and last stops on the tour, I will analyze these two sites in conjunction. I engage the two middle stops on the tour afterwards, as a separate grouping, since they rely not upon the loaded sign of the wood bison but upon a mimetics of scale to manage the material politics of oil sands capital.

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[23] Gibbs and Brown Landscape Architects Ltd. The oil sands are profiled among other examples of their industrial landscapes at: <http://www.gblandarch.com/portfolio/industrial.htm> (March 26, 2003).

As Mark Simpson notes in a critique of turn-of-the-century collection practices in North America, "the wildlife specimen and the First Nations artifact [are] objects whose affiliated synecdochic powers remain talismanic for white supremacy" (89). The wildlife specimen and the indigenous artifact indeed combine into a talismanic sign in Syncrude's unofficial wood bison mascot. The economic and symbolic power of oil sands capital over Aboriginal lands and labour in Canada's north constitutes a persistent discourse of white supremacy disavowed by Syncrude's postcolonial rhetoric, a rhetoric appearing in its most condensed form in the mantra recited, as I've mentioned, in its promotional media: "Syncrude is the nation's largest industrial employer of Aboriginal people." If Syncrude's bison sculptures are on the one hand designed to welcome visitors to a postcolonial time and space of oil sands capital in which Aboriginal employment and cultural empowerment are promoted, at the same time they constitute a contradictory practice of mascotry, one productive of an ethnographic image of indigeneity. While not distasteful or exaggerated racial stereotypes like many of the native mascots fashioned by American university fraternities and sports teams, the massive sculptures which Syncrude has mounted at "Wood Bison Gate" are nonetheless caricatures which amplify a stock image of indigeneity, more dangerous precisely because they appear to be aesthetically "tasteful" (see Figure 6). The contradictions between a postcolonial rhetoric of economic equity via employment of Aboriginal people, and ethnographic tropes of "primitive" otherness reactivated by its bison mascotry, are supremely productive for oil sands capital, so long as it is able to render them within a relation of supplementarity rather than antagonism.

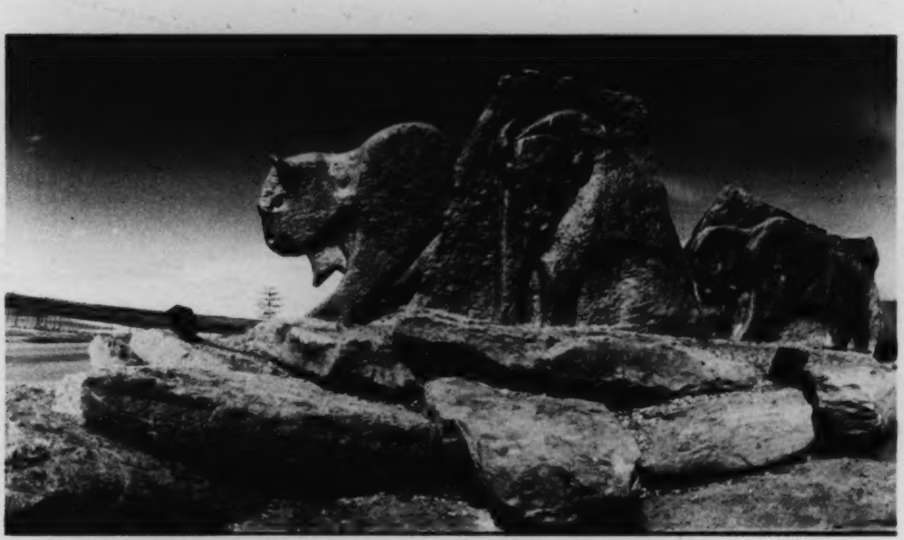

Figure 6. "Welcome to Syncrude," the first stop on the oil sands tour. Photo courtesy of Syncrude Canada Ltd.

Theorizing Syncrude's bison sculptures as mascots allows me to begin tracking the neo-colonial relations dissimulated by oil sands capital. Strategically presenting itself in sympathetic alignment with indigenous and environmentalist politics through the talismanic figure of the wood bison as a *native species*, Syncrude mimetically articulates with the two constituencies potentially most antagonistic to its operations in the north. Communicating with the public via an endangered animal sign popularly perceived as synonymous with Aboriginal life, Syncrude can avoid racist discourse *per se* – and on the contrary cast itself as a postcolonial corporation attuned to the need to preserve indigenous culture and to encourage First Nations self-determination – while simultaneously insinuating an essentialist discourse of Aboriginality with a fixed, subordinate relation to white cultures of capital. It is in this sense that the figure of the wood bison in the oil sands text remains "talismanic for white supremacy" (Simpson).

Before unpacking the ethnographic tropes of Aboriginal life which Syncrude's bison signs arguably evoke for tour-goers let off the bus at "Wood Bison Gate," I want to first briefly bring attention to mascotry as a powerful mimetic technology, a technology of political communication. According to the *Oxford English Dictionary*, a mascot is "a person, or a thing, animate or inanimate, supposed to bring luck." "Mascot," which can be etymologically traced to *masco*, or witch, might be aligned with other practices of "mimetic magic" which craft an effigy or figurine in the likeness of an object in order to affectively communicate a charm or malediction (Taussig 21). Taussig supplies such a framework in his resuscitation of James George Frazer's anthropological study of sympathetic magic in *The Golden Bough* (1911). There Frazer describes, among other things, how sorcerers of Jervis Island manipulate effigies to affect the subjects they resemble. As Taussig relays, "[i]f the sorcerer pulled an arm or a leg off the image, the human victim felt pain in the corresponding limb, but if the sorcerer restored the severed arm or leg to the effigy, the human victim recovered" (49). While Taussig doesn't explicitly theorize mascotry, it is fairly safe to assume that it would qualify for a place among what he calls the "mimetic mysteries," wherein "the image affect[s] what it is an image of" and "the representation shares in or takes power from the represented" (2). I risk presuming, furthermore, that Taussig would count the native and animal mascots paraded by modern North American institutions among the signs he discerns of a "resurgence" of mimesis in modernity, a resurgence which he sees as upsetting a colonial balance of power established, in part, along the lines of the difference discriminating so-called cultures of primitive mimesis from those of so-called enlightened reason (20).

It would be risky, however, to read mascotry in the context of the ethnographic examples of mimetic magic supplied by Taussig, since mascotry is arguably a form of mimetic power deployed within modern cultures of capital precisely to excite an ethnographic imagination. Rather than tracing its fascinating resemblance to "other," exoticized practices of sympathetic magic, I prefer to implicate the communicative potency and political malevolence of mascotry in the politics of rendering, that is, in contexts of mimetic power specific to the relations and cultures of capital. To this end, I briefly draw attention to how mascotry emerges as a biopolitical technology of white capitalist culture, helping to discursively perpetuate colonial relations of power through new, seemingly innocuous means.

In their introduction to *Team Spirits; the Native American Mascots Controversy* (2001), C. Richard King and Charles Fruehling Springwood provide the more pressing context within which a politics of modern mascotry can be traced:

> Importantly, the increased use of Native American culture to (re)create self and society for fun and profit corresponded with the final stages of the Euro-American subjugation of Native Americans and in the process sought to restrict their traditional practices and precepts, particularly dance, ritual, and spirituality. It was in this context of well-worn and accepted patterns of playing Indian, imperial nostalgia, and the imperial momentum to control Indian expression that Euro-Americans began to fashion Native American mascots. (10-11)

From the ubiquitous Cigar Store Indians and the native mascots of national sports teams such as the Washington Redskins, to the hordes of animal mascots mobilized through the commercialization of childhood as well as through burgeoning ideologies of cultural re-creation and wilderness conservation (closely linked to rising interests in sport and outdoorsmanship around the turn-of-the-century[24]), animals and indigenous people are the incessantly intertwined subjects of North American mascotry. As cultural stereotypes, mascots *do* exercise power over the historical subjects they represent, though it is important to resist fascination with such mimetic power as "magical" in the de-politicized sense risked by Taussig. More crucial is an attempt to interrogate the political, cultural, and economic interests which ride upon mascotry's mimetic potency. If native mascots are talismanic figures "supposed to bring luck," then "luck" needs to be interrogated as the occulted register of those cultural and economic privileges accruing to subjects with the most means to direct mimesis toward their own ends. Syncrude's bison mascotry thus operates both as good luck charm *and* as malevolent statecraft, bringing the corporation good luck by diffusing political antagonism around its mega-project in the north, while reviving an ethnographic sense of primitive indigeneity which covertly naturalizes the continued subordination of First Peoples within the oil sands' neo-colonial scheme of things.

This winds me back to the welcoming gesture extended by Syncrude's stone bison at the first stop on its industrial tour. "Wood Bison Gate" opens onto Syncrude's Mildred Lake facility, the largest mining installation operating in the Athabasca tar sands both in terms of area and production volumes.[25] Beneath the enormous bison sculptures reclining upon a grassy mound overlooking Highway 63, Syncrude has constructed an interpretive pavilion and pebbled a few text-guided

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[24] For a powerful critique of the conservationist ideology of the Roosevelt era, see Donna Haraway's "Teddy Bear Patriarchy" in *Primate Visions: Gender, Race and Nature in the World of Modern Science* (1989). For a critique of the white American fascination with "playing Indian" encouraged by early boy scout movements, see Mark Seltzer's *Bodies and Machines* (1992), and for a study of the emergence of American cultures of sport and recreation around the turn of the century, see Bill Brown's *The Material Unconscious. American Amusement, Stephen Crane, and the Economics of Play* (1996).

[25] Hugh Gibbins notes that the Mildred Lake mine "produces over 220,000 barrels of oil a day, a figure that is expected to double by 2008…and covers approximately 21,000 ha" ("Industry, Aboriginal Communities, and Sustainable Development: the Syncrude/Fort McKay Wood Bison Project" 4).

"discovery trails" which not only mimic colonial discovery tropes of *terra nullis*, but which simulate peripatetic access and pedestrian agency at the edge of a landscape which in actuality no longer welcomes anything but rational capital on an astronomical scale. Here tour-goers get their first glimpse of bald pits exceeding the visual frames of the naked eye – rolling vistas of terraformed embankments and glittering northern lakes which the guide points out as sites of reclaimed overburden and tailings ponds[26] - and of a landscape which forbids anything but geo-capitalist exploration.

Emulating the cartographic license to mark provincial borders (i.e. "Welcome to Saskatchewan" or "Welcome to Alberta") or to erect federal signposts notifying visitors of national sites of significance such as Wood Buffalo National Park (directly west of the oil sands), private capital poses as elected arbiter of public lands. The signs of public governance simulated by Syncrude sumptuously mimic the provincial or national license to materially manage territory. As Larry Pratt notes, local residents jokingly deconstruct the corporate imposture by nicknaming the oil sands "Syncrude National Park" ("Sticky Business…" 2). The first stop on the tour - with its interpretive pavilion and plaques, its "discovery trails" punctuated with information which swings easily from marketable bites of Cree cosmology to naturalist identifications of *ursus americanus* (black bear) and *rubus idaeus* (wild red raspberry) – evokes similar interpretative sites in Canada's provincial and national parks, and thus associates the reclaimed landscapes of industrial capital with protected wildernesses. Like the provincial and national parks discourses which it mimics,

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[26] "Overburden" is the name given to the layers of sand, gravel, and shale which must be removed prior to mining. The massive quantities of water used to steam the oil free of sand after it has been mined create tailings ponds the size of lakes; it takes years for toxic oil sands residues to settle to the bottom of the ponds. Interestingly enough, while the toxic ponds easily pass as lakes within the visual framework of a tour which invites visitors to trust that seeing is believing, they are betrayed by a regular sonic "boom" shot from propane canons floated on rafts, a sound fired to scare ducks away from the ponds in concession to environmental regulations around migrating wild fowl.

Syncrude's interpretive site allows for – in fact, it depends upon - slippage across signs of nature, natives, and animals.

Text at the gateway welcomes visitors to "Matcheetawin," Cree for "Beginning Place." An interpretive plaque reads:

> Matcheetawin means "beginning place" in Cree, and we think that's appropriate….The Matcheetawin Discovery Trails is a reclaimed area built on earth and material we dug out of our mine (this includes the 130 million-year-old Cretaceous siltstone slabs embedded in the pathway).

In the sympathetic postcoloniality it performs by showcasing Cree language and culture (asserting its distance and difference from colonial attempts to suppress and eradicate indigenous culture), Syncrude both affectively affiliates itself with Aboriginal groups in the north and brings its mine sites to symbolic closure, sealing off recognition of the irreparable ecological and social damage it returns to First Peoples in the region. By invoking the chronotope of a "beginning place" to frame the end of extraction capital, Syncrude maps an ethnographic metaphor onto the closed loop of industrial capital drawn by the tour. The oil sands origin story of a "beginning place" subtly equates capital's industrial debits (the pits it has had to reclaim) with earth's cretaceous credits (the natural deposit before the time of mining capital). In seeming to humble itself before the timeless wisdom of the Cree chronotope, Syncrude in effect spiritualizes industrial capital and its reclamation practices, dissolving its violently disturbing material conditions and effects into the fluid natural sense of a cosmic nature-cycle.

More insidiously, Syncrude's ethnographic chronotope renders Cree culture a material sign in the shape of "130 million-year-old Cretaceous siltstone slabs," literally casting a sign of Aboriginality in the geological material of prehistory. Consolidating the promise it publicly makes to First Peoples at this stop on the tour to reclaim its mine sites with the act of unearthing and preserving ancient fossil rock, "Wood Bison Gate" symbolically collapses the vast material differences between the historical time and space of native culture and prehistoric geology, a difference which the machinery of the oil sands also all-too literally removes. Crude capital is made, after all, by removing the sandy strata lying between the surface formations of the present and the fossil formations of the past through deep-pit mining, stripping away layer after layer of overburden until earth's prehistory is rendered geophysically flush with the present. If oil sands capital is intent upon removing the slabs of chronologized matter which separate the here and now from a sedimented prehistory (in order to literally remove and split the economic difference), it is also ideologically invested in eclipsing the difference between historied Aboriginal culture and geological prehistory. The symbolic capital of its reclamation discourse depends upon it. The conflation of an animal sign of Aboriginal culture with fossil matter at this site is, after all, what normalizes the logic of digging deep into the prehistoric bedrock for the material which mediates Syncrude's symbolic gesture of returning the land to its native state.

The material politics of oil is likewise eclipsed at "Wood Bison Gate," disappearing as a volatile political commodity through its similar portrayal as a prehistoric specimen. A natural history of oil is, as one plaque at the gateway playfully puns, "[h]istory you can really dig." Syncrude's interpretive discourse continuously displaces its economic motives with ostensibly disinterested scientific objectives at this stop on the tour: "We hit pay dirt in our mine by digging back through 110 million years of earth." *Pay dirt* – slang for unabashed cash profits – is displaced onto the archaeological value of the mineral specimen, diverting recognition that for oil sands capital "pay dirt" derives rather from a mass, non-discretionary extraction of earth. Yet the insinuation at "Wood Bison Gate" is that Syncrude's "interest" in the region is driven less by economic motives than by an appreciation of earth's natural wealth. By framing the mineral deposit as a natural history museum in which notable specimens of carbon life are preserved, Syncrude diverts attention from the fact that it is the very same "pay dirt" which it ruthlessly strips and steam-sterilizes under the myopic imperative of separating oil from sand. Or rather, oil sands capital productively renders a contradictory discourse of disinterested preservation and economy-of-scale production out of the same resource.

Syncrude's suggestion that capital's industrial impact is reclaimed (and redeemed) through the archaeological salvage of prehistoric remains is reiterated in the display of yet another specimen at the Syncrude gateway. This time the logic of archaeological preservation displaces a logic of economic production at the site of a plaque exhibiting "[f]ossilized tree remains." The 110 million-year old Swamp Cypress tree, reads the plaque, "isn't the only fossil to be unearthed in Syncrude's mine. Remains have also been discovered of ichthyosaurs and plesiosaurs, both ancient marine mammals." Like the symbolic "pay dirt" of the gateway's siltstone slabs - a mineral detail pulled into relief out of an otherwise amorphous oil sands mass - the preservation of the swamp Cypress is a sympathetic rendering of the geological deposit which displaces recognition of the pathological systematicity of Syncrude's economic production. Associated in this way with the knowledge production of the physical sciences, Syncrude's open pit mines begin to resemble magnified archaeological digs operating in the public interest by excavating a wealth of specimens for the naturalist record.[27]

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[27] The resemblance is more than an aesthetic effect induced by the tour's exhibits. Hired to undertake impact assessments for Syncrude, archaeologists have developed more than 100 archaeological sites in its Aurora Project area alone. Archaeologists are narrated as being thankful for the strip mining which has made discovery of prehistoric artifacts possible in a previously little-studied area: "Thanks to oil

Yet the plaque is also a flammable site where the illogic of museological preservation and resource production threatens to ignite. The singling out of the swamp Cypress from an otherwise industrially allocated resource is, as with the siltstone slabs, a profoundly arbitrary move; all that separates the swamp Cypress as a notable artifact from the rest of a fossil deposit destined for crude are Syncrude's museological mimetics. Readers of the veneered plaque who, raising their heads and catching sight of an unfathomable expanse of bald pits beyond the edge of the reclaimed area on which they stand, may glimpse the arbitrary construction of difference between the carefully preserved fossil and mere material. For the mimetic resemblance which the Syncrude tour establishes between the preservationist agenda of the natural science museum and the extractionist agenda of the mine hinges upon its tenuous ability to randomly split the fossil deposit into two species of value. Capital decides whether the fossil deposit will render a preserved specimen or a barrel of *Syncrude Sweet Blend*.[28] While oil sands capital manages the two as supplementary economies of sense, a politics of rendering aims to provoke this double discourse into incommensurability and antagonism. In the glaring proximity of the double logic which partitions nature into talismanic specimen and expendable jelly, resistant readers of the oil sands text might find an opening within which to confront capital's duplicit renderings.

If the preservation of prehistoric specimens enables Syncrude to mimetically manage against recognition of the denatured nature it leaves behind, its bison mascots

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sands development, for the first time archaeologists are now able to piece together aspects of prehistoric life for almost the entire ten millennia humans have lived in the Athabasca Lowlands" (Graham Chandler, "The First Boom: Industrious Ancestors traced by trail-blazing impact assessments done for oil megaprojects," *Oilweek Magazine* 17).

[28] The synthetic crude which Syncrude produces is branded *Syncrude Sweet Blend*, as aromatic and depoliticized a consumable as coffee (innocently appealing only when divested of the neo-colonial exploits of capital which convert South American nature and labour into North America's daily beverage). The branding of oil marks the moment when "mere jelly"gets aestheticized as an exchange-value.

more specifically manage against recognition of its neo-colonial relation to Aboriginal lands and labour.[29] The petrification of native culture as natural artifact is connoted not only by the cretaceous rock with which Syncrude materializes the chronotope of the tour's "beginning place," but is also communicated through the material media of the bison sculptures presiding over this stop. As text at the gateway informs tour-goers, Syncrude also mined the geological bedrock for the material used in its bison sculptures:

> We hit pay dirt in our mine by digging back through
> 110 million years of earth. There we uncovered
> siltstone slabs weighing an average of 30 tonnes each.

An Aboriginal artist, Brian Clark, was hired to sculpt the bison figures out of the unearthed slabs. The tour-guide notes that "the scale of the project was overwhelming. The rocks were more than two stories high…it took Clark and his assistants 50,000 hours to create the statues." The finished sculptures stand for Syncrude's collaboration with the Fort McKay First Nation to restore the land to biological vitality. A focal interpretive plaque beneath the bison reads: "These sculptures pay tribute to the ongoing success of this project. They stand as Syncrude's promise to return the land we mine to a healthy and productive state."

There are at least two levels of political communication at work in Syncrude's bison mascotry, or what Taussig terms a "two-layered" mimesis: the "magic of the image, of the visual likeness" and the "magic of substances" (21, 51). The first is the more apparent: it is the ethnographic image of Aboriginal life evoked by crude bison pictograms, whose deliberately naïve mimetic fidelity is reminiscent of prehistoric cave paintings. By communicating an image of indigeneity pictographically, as it were, by way of a non-linguistic sign of an animal with which North America's First Peoples are presumed to be in eternal relation, Syncrude associates Aboriginality with a "savage" mimesis. The mounting of animal pictograms can be read as an invitation to tour-goers to "think in pictures" in relation to Aboriginal culture (Lippit 9), that is, to sympathetically "respect" the timeless and simplistic animal signs of the Aboriginal people whose resources are being "developed" by capital.

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[29] I use the term "denatured" in the sense of making a substance unfit for consumption as use-value. As Noëlie Vialles describes it in relation to the denaturing of meat: "…the object of denaturing is to avoid any misappropriation. It consists essentially in making the meat unfit for use as food, even for animals, by first slashing it, for instance, and then pouring disinfectant or paraffin over it; or it may consist in simply making the meat look repellent" (*Animal to Edible* 34). I recall Richard Thomas's claim that "oil sands technology (heat, solvents, steam) actually *does* sterilize the land," or in other words, denature it (*Wild Lands Advocate* 10).

The mimetic power of mascotry involves, moreover, Syncrude's attempt to render Aboriginality a visceral sign, to by-pass "mediated" sense for a more immediate, communicative potency. In the excavated siltstone slabs used in Syncrude's bison mascotry there is what Taussig calls a "magic of substances" at work, a communicative politics operating at the level of the substance of the sign. To fashion an animal figure of Aboriginality out of prehistoric rock is, as I've already noted, to insinuate the noncontemporaneity of Aboriginal life through the "raw" material of the sign, where meaning seems to be pre-discursively given rather than politically mediated. Taussig describes such a "magic of substances" at work in effigies made by South American sorcerers:

> If the image was to represent an Indian, it was made of the fat from a llama mixed with corn (maize), native to the Americas. But if the image was of a Spaniard, pig fat and wheat, both associated with the colonizing power, were used instead....This coding of colonial relations makes us aware not just of the magic of the image, of the visual likeness, but of the magic of substances as well....(50-1)

Here, however, it is white transnational capital which encodes a paternalistic discourse on the perennially primitive nature of Aboriginal culture within the seemingly pre-discursive matter of the mascot. The phenomenality of the siltstone slabs out of which a figure of Native American life is hewn renders indigeneity an autochthonous sense communicated affectively, immediately. Sculpted out of prehistoric slabs by an Aboriginal artist, Syncrude's wood bison retain the ethnographic value of untouched artifacts for white tour-goers.

Seemingly incompatible with the affective sense of archaic indigeneity conjured for toer-goers by its mascotry, however, is Syncrude's interest in the labour value of First People, an economic interest which would seem at odds with the ethnographic currency of viewing Aboriginal culture as a pre-capitalist artifact and natural specimen. In the productive contradiction between the ethnographic sense of indigeneity mobilized by Syncrude's mascotry, and its widely proclaimed empowerment of Aboriginal people through industrial employment ("Syncrude is the nation's largest industrial employer of Aboriginal people"), there is an even more insidious force of what Étienne Balibar calls "class racism" at work in the oil sands text. The interpenetration of "ethnic racism" and "class racism" theorized by Balibar captures First Peoples, in this instance, in the double bind of being rendered both a totemic ethnicity *and* an economic underclass conscripted into outmoded forms of industrial labour in a post-industrial era of capital (214). The merits of pro-actively employing Aboriginals within a mining economy just as industrial capitalism is being historically demoted by the rising hegemony of information economies are ambiguous, to say the least. While white, middle-class North America advances toward "forms of immaterial labour" in "the passage from an industrial to an informational economy" (Hardt and Negri 294), Aboriginal people are trained into the "truck and shovel" Taylorism of a backward mode of production.[30] Recruiting

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[30] Hardt and Negri claim that "[i]n our times…modernization has come to an end. In other words, industrial production is no longer expanding its dominance over other economic forms and social phenomena" (*Empire* 285). In its place, they state, are "processes of immaterial labor that involve the manipulation of knowledge and information…" (295). Primary production at the site of the oil sands, however, while incorporating information technologies to some degree, still depends upon "truck and shovel" forms of industrial labour. As the Suncor corporation notes in its 2002 *Annual Report*, "since

Aboriginals into its workforce is presented by Syncrude as a token of its progressive-minded, postcolonial corporate culture, yet it is transnational capital which most stands to benefit from a captive pool of indigenous labourers, exploiting the legacies of colonialism and the discriminating effects of contemporary Canadian national policy to racialize primary production.

The oil sands text thus accommodates the double logic with which Syncrude maximizes the symbolic capital of Aboriginality as a petrified, ethnographic artifact, in productive contradiction with the material enticements and pressures it places upon indigenous people to "develop" within its industrial economy. The postcolonial good relations which the bison are designed to visibly signify dissemble the economic racism of continuing to bar First Nations from significant ownership of land and resources, while assimilating them as labour into an industrial culture of capital. Assimilation into capital barring ownership of resources and of the means of production is nothing short of a neo-colonial recipe for a racialized class.[31] Syncrude's much-publicized employment of Aboriginals, in combination with Canada's state injections of token capital into Aboriginal communities affected by oil sands development, are little more than mollifications which *mimic* the surplus which

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we began mining oil sands in 1967, Suncor has improved the efficiency of our operations with new technologies and processes such as the conversion to truck and shovel mining in the early 1990s" (11).

[31] Under Canada's Indian Act, Aboriginal people have not been able to treat land as a capital asset (but rather have been restricted to "traditional" uses of resources). Canada's 1986 Comprehensive Claims policy likewise "does not recognize the existence of Aboriginal title or Aboriginal ownership of surface and sub-surface resources, and caps potential resource revenue-sharing arrangements" (North-South Institute, *Aboriginal Peoples and Mining in Canada* 9). Although in several recent land claims decisions (i.e. the precedent-setting 1997 *Delgamuukw* decision) Aboriginal groups have successfully negotiated for title to mineral resources, the Crown continues to hold subsurface and surface resource rights on most treaty and settlement lands in Canada and retains the power to lease resources out to national and transnational developers (Ibid. 7). Under the original Treaty 8, which applies to many Aboriginal people in the Athabasca region, the Crown assumed rights over what it already guessed would be a "gold mine." Even in his glowing historical account of oil sands development, J. Joseph Fitzgerald remarks that "the timing of the 1899 treaty, Treaty 8, was interesting in the light of the government's recent work in oil exploration" (33).

returns to owners, masking the fact that a neo-colonial hierarchy of resource ownership remains firmly in place.[32]

Syncrude's bison mascotry can be read, ultimately, as one of the mimetic technologies with which neo-colonial capital aesthetically glosses over the unresolved and contentious politics of Aboriginal title. When the Fort McKay First Nation agreed to "partner" with Syncrude on its bison recovery project, it had been awaiting an outstanding land claims settlement.[33] By the time its land claim with the Canadian government was finally settled in 2003, giving the Band license to develop the natural resources on its lands, an even more deeply entrenched infrastructure of oil sands development, funded by transnational capital, was making symbolic and economic collaboration of one kind or another increasingly unavoidable for First Peoples, regardless of the resolved or suspended status of their land claims. Treaty appeals of the Wood Buffalo and Lubicon Cree First Nations, to name just a few, are under constant threat of being sterilized by on-going leases to oil, gas, and forestry transnationals in Canada's northwest.[34] The Lubicon Cree have mobilized a powerful boycott against the pulp and paper products of Daishowa Inc. for de-foresting lands

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[32] Canada has welcomed other oil super-majors rushing to join Syncrude and Suncor in developing the oil sands, using gifts of capital to mollify First Peoples. As the Department of Indian and Northern Affairs announced in a news release: "The Honourable Robert D. Nault, Minister of Indian Affairs and Northern Development, signed an agreement with the Athabasca Tribal Council (ATC) to provide up to $1.2 million in federal funding over the next three years to continue to support ATC's role as a partner in the estimated $50 billion expansion of the Athabasca Oil Sands over the next 12 years. The funding will assist the ATC to secure ongoing social and economic benefits from the oil sands development and is a continuation of a previous agreement signed three years ago, where the federal government committed $750,000" ("Minister Nault Signs Capacity Building Agreement with Athabasca Tribal Council to Promote Natural Resource Industry Partnerships," January 9, 2003 <http://www.ainc.ca> March 22, 2003).

[33] "In May 1987, the Fort McKay First Nation filed a specific claim contending that Canada had not fulfilled its obligation under Treaty 8 to provide treaty land to the First Nation….On May 17, 1994 the Commission agreed to conduct an inquiry into the claim….[and] concluded that Canada owes a lawful obligation to the Fort McKay First Nation to provide treaty land for all members, including absentees, late adherents, and landless transferees. It has not been settled" (Indian Claims Commission, "Report on the Inquiry Into the Treaty Land Entitlement Claim of the Fort McKay First Nation," 1995). Since I first began work on this chapter, the Fort McKay First Nation signed a land claims settlement on September 3, 2003, and subsequently announced plans to develop the first community-owned oil sands mining operation in the region.

[34] Wood Buffalo First Nation (comprised of approximately 200 members), was formed in 1997 and is having difficulty obtaining official recognition.

(allocated to Daishowa by the provincial government) which overlap territory claimed by the Lubicon in a still-unsettled dispute. Syncrude, by contrast, has been largely successful in diverting the contestations of First Nations, despite the arguably terminal damage it wreaks on its leased lands. At the last stop on its tour, a signboard entitled "The Future: Lakefront Property" tells visitors that "around 2015, this viewpoint will overlook an area fully reclaimed with lakes and forests." Real estate and recreational tourism are the two prospects Syncrude envisions for its reclaimed mine sites, prospects which pledge the land to renewed "health" within affluent white cultures of capital. Global capitals' fatal treatments of leased Aboriginal lands arguably forecloses the possibility of any return to use-value (trapping, hunting) within the mixed cash-subsistence economies practiced by many indigenous people in the north. Ruined for anything but re-capitalization as recreational destination or "lakefront property," what oil sands capital promises to return to Aboriginal people in the region is the death of nature as use-value and the future of nature as exchange-value.

First Peoples in the north thus face the double threat of being aesthetically "fossilized" and economically "assimilated" into transnational capital. I want to wrap up this stop on the tour by using Syncrude's bison mascotry as an occasion to examine the relation between its hegemonic operations and surviving signs of subsistence economy in the Wood Buffalo region. For among the ethnographic chain of associations triggered by its animal pictograms, arguably, are reductive tropes of subsistence. "Wood Bison Gate" is, after all, part of a discursive network of other interpretative sites in Alberta devoted to reconstructing scenes of the animal-based economies of Aboriginals, particularly Head-Smashed-In-Buffalo-Jump in southern Alberta. At the Head-Smashed-In historic interpretive site, as at Syncrude's "Wood Bison Gate," bison are represented as iconic of Aboriginal culture; they are dioramically depicted, at Head-Smashed-In, stampeding off of a cliff to their death in one of the ur-scenes of Aboriginal life. The bison-kill as a primal scene of subsistence economy is arguably latent in the ethnographic imaginary evoked through Syncrude's mascotry, a scene in which nomadic hunter-gatherer economies are imagined revolving around immediate gratification of physical needs, ostensibly unable to save beyond each season. In the popular perception of indigenous subsistence encoded in the sign of the bison, First Peoples are remembered as historically lacking the logic of stockpiling which initiates the "primitive accumulation," economic progress, and triumphant superiority of capitalism.[35]

How, one has to wonder, does Syncrude get away with invoking a trope of subsistence at the very gates to economy-of-scale production? The in-one's-face, yet paradoxically incomprehensible sight of the oil sands, seems to confer upon capital a material and political invisibility which gives Syncrude license to control the semiotics of admission. By having tour-goers pass through the "natural" sign of subsistence to gain entrance to its mining operations, as it were, Syncrude diminishes the material and political ramifications of its industrial operations. Its wood bison pictograms are placebos helping visitors feel better about the staggering expanse of denatured nature they are touring. Yet the tour will simultaneously inscribe its supremacy over and unmistakable difference from pre-industrial economies by flexing its technological might; the monolithic machinery of oil sands development marks such a vast improvement over and enlargement upon the scale of subsistence that the comparison is simultaneously canceled. The kind of "playing Indian" which Syncrude performs through its bison mascotry is, as Philip Deloria notes, all about managing such a contradictory play of identification and difference:

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[35] The bison-kill is a mainstay of museum exhibits of Aboriginal culture. Exhibiting an awareness that colonial tropes of subsistence need revising, however, the Provincial Museum of Alberta (in the Syncrude Gallery of Aboriginal Culture) now acknowledges evidence of "surplus" killing and of animals left for waste around historic buffalo jumps, evidence which complicates both degrading stereotypes of bare animal subsistence and "noble" stereotypes of cultures innocent of waste and excess. In a diorama entitled "500 Years Ago: Buffalo Hunting as Art," the provincial museum allows that subsistence economies are not driven by mere biological survival, but are *cultural* economies which include forms of surplus production: "Blessed with this landscape [full of buffalo jumps], the people of the region easily fed themselves and still produced a surplus of bison food and hides. This surplus may have been used to trade for desired items not locally available."

> Playing Indian offered Americans a national fantasy – identities built not around synthesis and transformation, but around unresolved dualities themselves. Temporary, costumed play refused to synthesize the contradictions between European and Indian. Rather, it held them in near-perfect suspension. (185)

Syncrude's bison mascotry similarly poises subsistence and exchange-value "in near-perfect suspension," at once blurring the difference between economy-of-scale mining and indigenous subsistence modes *and* contradictorily re-inscribing the difference between white industrial capital and Aboriginal subsistence economy as a racial absolute. The native body is expected to symbolize the nature but to literalize the labour of oil sands capital, according to the double discourse of indigeneity calibrated in the oil sands text. If such tensions can be managed without flaring into antagonism, the sign of Aboriginal life will produce twice the interest for oil sands capital.

In an essay entitled "Walt-Disney's Ape-Man: Race, Writing, and Humanism," Eleanor Byrne and Martin McQuillan analyze several Disney films for their "displacement of a racial thematic" onto a founding binary of humanism: the absolute difference of animal and human (104). They track this humanist binary through Heidegger's 'Was heist Denken? ("What Calls for Thinking"), where Heidegger writes:

> The hand is something altogether peculiar. In the common view, the hand is part of our bodily organism. But the hand's essence can never be determined, or explained, by its being an organ that can grasp. Apes, too, have organs that can grasp, but they do not have hands. The hand is infinitely different from all the grasping organs – paws, claws, or fangs – different by an abyss of essence. Only a being who can speak, that is, think, can have hands and can handily achieve works of handicraft. (qtd. in Byrne

and McQuillan 108)

While Freud locates the definitive split between human and animal in the ascendance of vision over smell, Heidegger's fraught etymology of a technological essence shows how important it is to also consider the repeated distinctions Eurocentric discourses make between the hand and the "grasping organs" of animals as a means of discriminating the properly human.[36] As Byrne and McQuillan claim in a reading of Disney's animated version of Edgar Rice Burroughs' novel *Tarzan of the Apes*, it is specifically "Kala's prehensile paw" which condemns her to animality, while Tarzan's evolved hand, with its opposable thumbs, signals his humanity (113). The massive opposable limbs of oil sands machinery can be read, similarly, as prosthetic extensions of a discourse of the human hand, whose essence is technological. The scaling up of the white human hand points toward a technological destiny which differs in essence, not degree, from the prehensile, i.e. animal, grasp of subsistence, which is ostensibly able only to gratify immediate needs. While Syncrude dresses up as a subsistence economy through its bison iconography, then, it alternately retains the discretionary power to differentiate the humanist progress of capital from Aboriginal signs of bare "animal" subsistence.

While the simian popularly enciphers one discourse of prehensile race in American culture - encoding, as Byrne and McQuillan note, African-American masculinities, in particular – the buffalo is the animal sign which persistently caricatures Native Americans as prehensile, nomadic bodies of the past, chasing their next meal before them. At the Syncrude gate, the animal sign of prehensile race is literally cast in prehistoric rock, by virtue of which subsistence gets both aesthetically reified *and* historically invalidated as a contemporary economy still practiced by Aboriginal trappers and hunters. Hints of prehensile subsistence compound the racialization of class within the oil sands text by helping to consign the labour of primary production to prehistory, as well. For in late capitalism, the human essence of the hand has arguably been upgraded to the keyboard of information technologies, while manual labour as a previous mark of the human gets demoted to the prehensile domain of primary production. That is, the ever-advancing line which the humanist ideology of capitalism draws to distinguish the properly human and technological from the prehensile and animal, organizes not only a discourse of racial difference, but also historical distinctions between "post-industrial" and "industrial" technologies and ages of capital.

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[36] Freud locates the ascension of human civilization, as Cary Wolfe notes, in the "shift of privilege in the sensorium from smell to sight, the nose to the eye" ("*Faux* Post-humanism, or, Animal Rights, Neocolonialism, and Michael Crichton's *Congo*" 118). Heidegger's different emphasis on the hand as a defining sign of the human is perhaps more apt, however, to the machine culture of earth-movers which operate on the oil sands.

I've suggested that the double logic of petrifying an image of timeless Aboriginality *and* of training Aboriginal people toward a backwards future of industrial "development" generates double the value for Syncrude. However, glimpses of subsistence as a persistent material practice in the Wood Buffalo region may have the potential, albeit tenuous, to upset the productive supplementarity of these two currencies.

Subsistence practices survive alongside the rise of Aboriginal corporations and capital; in different ways, both critically intercept aesthetic attempts to encase native life within the static sign of a prehensile, pre-capitalist state of nature. The decision of the Fort McKay First Nation to develop a community-owned oil sands operation subsequent to the signing of its 2003 land claims agreement introduces a difference into the hegemonic development of the oil sands by private, transnational capital. Yet because Aboriginal corporations are exceptions to the neo-colonial rule of assimilation-without-ownership, their owners are exalted as "model" natives in national and transnational discourses of economic development. Aboriginal capital performs the exemplary suture, after all, of the euphemism of "development" to a market rather than subsistence logic. The exceptional owners and managers of Aboriginal capital are, furthermore, predominantly male.[37] While community-owned, native oil sands corporations do hold the potential to indigenize the oil sands text, the hybrid subsistence-cash economies practiced by many Aboriginal people in the north pose an irritant to the very triumphalist assumption of ostensibly inevitable capitalist development. For much as it may romanticize the hunting and gathering of the noble savage, market culture is intent on rendering subsistence economies a thing of the past.[38] The incentives and pressures to economically assimilate within a framework of capitalist development are designed to prevent alternative economies from having anything but symbolic currency within the rule of global capital. Nevertheless, the persistence of practical subsistence is glimpsed every now and then in the oil sands text.

Syncrude tries to put a spin on the fact that – desperate to procure labour for an industrial schedule that the tour-guide declares "never stops, 365 days a year, seven days a week, twenty-four hours a day" - it has had to accommodate Aboriginal employees who refuse to work some of the winter months. According to a case study on Syncrude included in the *Fifth Annual Report on Aboriginal Participation in the Mining Industry of Canada* (1994):

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[37] "The colonial imposition of the Indian Act on previously sovereign nations meant in many cases that male-dominated Band Councils usurped the traditional political power of women. Consequently, when Land Claims negotiations take place between the Canadian and provincial governments and Band Councils, the voices of women are often marginalized or excluded. This change in political power is exacerbated when resource corporations conduct specific negotiations with the Band Council rather than with more broadly constituted community structures, or with traditional forms of Aboriginal government" (North-South Institute, *Aboriginal Peoples and Mining in Canada* 12).

[38] Not just capitalist ideology, but classical Marxist ideology also forecloses against the co-terminous co-existence of capitalist and subsistence economies. According to the dialectical trajectory made famous by Marx, capitalism appears as the necessary historical precondition of communism; what Marx called the "primitive communism" of non-capitalist cultures was something he predestined to the past by narrating the inexorable historical unfolding of the materialist dialectic.

> During Syncrude's formative stages, the company made a promise to government to employ Aboriginal workers. Its initial entry into Aboriginal employment almost collapsed as a result of high turnover. According to company officials, Aboriginal workers and their families could not adjust to the 7 days work/ 7 days off system, and this led to social problems, followed in some cases by job termination. (<http://www.ainc-inac.gc.ca/ps/nap/abo/abo5/appC_e.html> April 6, 2003).

In Syncrude's solution to the turnover of Aboriginal labour can be glimpsed the agency of subsistence practitioners:

> Whereas the turnover rate of Aboriginal workers at Syncrude was 130 per cent in 1977and 45 per cent in 1980, it was 6.4 per cent in 1993....One reason for the [now] relatively low turnover rate of Aboriginal workers at Syncrude is undoubtedly the unique way in which the company's Oil Containment and Recovery (OCAR) program has allowed the workers to combine industrial employment with their traditional Aboriginal lifestyle. This program is run by Cree, Chipewyan and Métis employees from April to October, during which time they recover bitumen from the company's tailing basin. The program...leaves Aboriginal workers time during the winter months to hunt, trap and fish in the Athabasca region. (Ibid.)

The total capitalization of time which turns surplus out of each and every minute seeks hegemony over wage labour to ensure against lost time.[39] Yet First Peoples in the region, precisely because a colonial history and a national geographics have discriminated them out as racialized labour for industrial mega-projects in the north, acquire a degree of agency to modulate that hegemony. As local indigenous labour which oil sands capital strives always to have in reserve, Aboriginal employees have a modicum of leveraging power to demand that a capitalist schedule accommodate subsistence economy as a condition of retention. That is, Syncrude's interest in reducing subsistence to a sheerly aesthetic function in the sculptural fetishes at "Wood

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[39] The capitalist law that time is money is an obsession in the oil sands text. In a book published to commemorate its 30 years of operation, Suncor Energy Ltd. follows "a day in the life" of its operations (*Here's looking At You; A Day in the Life of Suncor Energy Oil Sands*, 1997). The book is visually organized around the reified image of time itself – a clock – which appears on every second page of the book and accounts for each minute of the day: "Like time itself, Suncor is a giant machine that never stands still" (2).

Bison Gate," toward the creation of its own cultural capital, is undermined by the continuation of subsistence as a material practice capable of pressuring the corporation to compromise, if only ever so slightly, the abstract logic of its operations. Reading between the lines of the oil sands text, then, it is possible to find "an affirmative inventory of the survival of alternatives" within the rule of capital (Llowe and Lloyd, 1).

Fourth Stop: "Wood Bison Viewpoint"

I leap over, for now, the two middle stops on Syncrude's tour and pass directly to "Wood Bison Viewpoint," where the animal sign of industrial reclamation has become flesh. The gaping wound of extraction viewed in between these two stops is effectively healed and sealed shut at this stop on the tour. When tour-goers step off the bus at "Wood Bison Viewpoint," their last impression of the oil sands is designed to be, like their first impression, one of native grassland, this time speckled with a live herd of iconic wood bison (see Figure 7). Syncrude's tour of the oil sands returns full circle to the affective sign of animal life, where it will perform the happy ending designed to bring the tour – and the environmental ravages of mining – to aesthetic closure.[40] The live herd on display at "Wood Bison Viewpoint" grazes upon reclaimed pasture just out of sight of their sculptural replicas on the other side of the highway, at the tour's "beginning place." The live mascots at the fourth stop on the tour consummate the ethnographic chronotope and close the loop of industrial sense. As the "living property" of Syncrude, the bison which compose the view at this stop serve as biological proof that the land has been returned to a state of health, ideologically completing the economic fantasy of the oil sands text (Seltzer, 53). In this section, I will theorize how live bison intensify the mimetics of mascotry and raise the biopolitical stakes of industrial capital's reclamation discourse.[41]

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[40] Throughout this section, I will alternately use "bison" and "buffalo." While "bison" is the scientifically correct species name, both plains and wood species were (and still are) popularly called "buffalo" in North America.

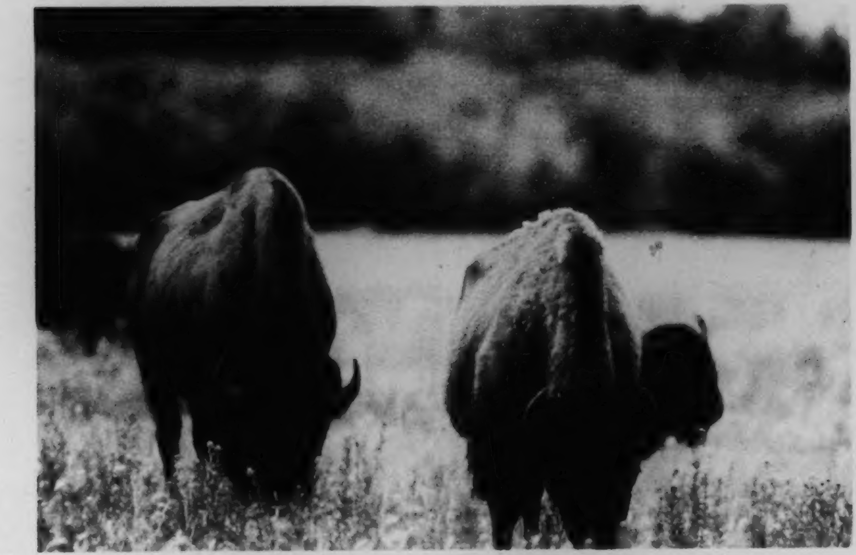

Figure 7. "Wood Bison Viewpoint," the fourth stop on the oil sands tour. Photo courtesy of Syncrude Canada Ltd.

The live bison on exhibit at the last stop on the tour symbolize Syncrude's postcolonial collaboration with the Fort McKay First Nation to environmentally reclaim its mined landscapes to forageable grassland. Although the reclaimed area was officially established to operate as a co-managed "ranch" – "Wood Bison Beaver Creek Ranch" – in its signage at this stop on the tour Syncrude erases the commercial rubric of the ranch and any connotation that its herd is managed as mere livestock, foregrounding instead its conservationist commitment to recovering "noble wood bison" to their historic range.[42]

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[41] Live animal mascots are usually associated with U.S. university and college sports teams, such as "Mike the tiger" (in the possession of Louisianna State University), and the live jaguar paraded by Southern University in Baton Rouge.

[42] In its 2002 *Aboriginal Review*, Syncrude intimates that because the original collaborative plan was to eventually hand the ranch over to the Fort McKay First Nation, its interest in the project is "pure" of commercial motivations: "In partnership with the Fort McKay First Nation, Syncrude introduced a few

One of several signposts framing the view of its pasture boasts: "Including the one here at Syncrude, only three pure wood bison herds remain in Alberta." A second so-called "pure" herd, tour-goers read, lives in Wood Buffalo National Park, almost directly adjacent to the oil sands. Yet as I will show, the purity and health of the "noble beast" in both industrial and wilderness parks are mimetic effects which disavow the contaminated and complicit logics of conservation and capitalization supporting Syncrude's reclamation discourse. As will emerge in the material genealogy of wood bison which I am about to trace, the conservationist logic which Syncrude mimics at this stop on its tour works in productive contradiction with the cultures of consumption which its industrial operations materially fuel.

As the finishing touch on Syncrude's field tour, "Wood Bison Viewpoint" reanimates many artistic signatures of bison rendering popular at the turn of the century in North America. Syncrude's fetish for the male "bull" bison at this stop on the tour resonates with discourses of turn-of-the-century conservationists (clustered most densely around the figure of Theodore Roosevelt), whose fascination with the lost virility of the wild bison arguably masked an ideological fixation on the fatherhood of imperialist culture and the recreation of white national manhood. Syncrude's reclamation discourse at this stop on the tour leans heavily upon a logic of wildlife conservation which, as I will unravel, is deeply complicit with a contradictory logic of animal capital. I will juxtapose Syncrude's bison exhibit with an earlier installation catalyzing conservationist movements around the turn of the twentieth century: William T. Hornaday's 1887 taxidermic installation of "the Buffalo Group"

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dozen head of wood bison, a threatened species, to a large section of land reclaimed from our oil sands operation. The project began as a pilot in 1993 to determine how well reclaimed land would support large animal habitat, and has been so successful that more than 250 wood bison now graze on some 340 hectares. The Beaver Creek Wood Bison Ranch is co-managed by Syncrude and the Fort McKay First Nation and is planned to develop into a permanent animal husbandry business for Fort McKay" (31).

at the U.S. National Museum (the Smithsonian) in Washington, D.C.[43] Syncrude's live staging of the great bull bison shares a duplicit logic of animal rendering with Hornaday's arrangement of the noble dead, and its reclamation discourse is as contradictory and motivated as Hornaday's conservationist practice. I will place Syncrude's biological mascotry at "Wood Bison Viewpoint" not only in the historical context of early conservation discourses in North America, but in the later context of the contemporary conservation politics surrounding another herd of "pure" wood bison in Wood Buffalo National Park (WBNP), a herd both geographically and ideologically proximate to the one on display at "Wood Bison Viewpoint."

Bison have a long history of being used as the medium through which colonial and commercial powers in North America have communicated their political malignancy to the indigenous cultures and natures they've striven to master. At the Museum of Westward Expansion in St. Louis, Missouri, General Philip Sheridan's imperialist call to buffalo hunters is memorialized: "Let them kill, skin, and sell until the buffalo is exterminated, as it is the only way to bring lasting peace and allow civilization to advance" (<http://www.ups.gov/jeff/mus-hunters.htm> March 10, 2003). Other U.S. Army leaders, such as Colonel Richard Irving Dodge, issued similar incitements: "Kill every buffalo you can. Every buffalo dead is an Indian gone" (qtd. in Wilson, "Bison in Alberta...," *Buffalo* 5). Aiming to fatally superimpose a U.S. or Canadian nation-state upon North America's First Peoples, imperial and colonial powers executed a death wish upon indigenous culture by means of exterminating the buffalo.

Full-scale industrialization in late nineteenth-century North America coincided with zealous campaigns of bison slaughter, the suppression of indigenous cultures, and westward expansion. Tanneries made hardy buffalo hides into leather drive belts as a rising machine culture opportunized upon the animal material suddenly flooding the North American market. Buffalo hunters supplied a white public's penchant for buffalo tongues and robes. Transnational railroad corporations in both the U.S. and Canada advertised the sport killing of bison from train windows to capture interest in the railways, and to help clear ponderous herds off of the line.[44] The Union Pacific and Kansas Pacific Railway companies both adopted the buffalo as their corporate icons, or brands.[45] Such commercial interests served as agents of expansionist ideology, physically superimposing a gridwork of white cultural power upon what was seen as a native state of nature. Much has been written about the specific "intersection" of railroad and buffalo in North America; while the single automobile increasingly assumed the profile of a wild animal, as I've discussed in my first chapter, the train yoked together individual boxcars into a mobile collectivity which both metaphorically and literally displaced the herd power once dominant in the west. The movement of mass cargo offered by railways made it possible to haul buffalo populations away in bulk pieces: tongues, skins, horns, hoofs, heads, and bones. A pseudo-rendering industry cropped up to collect the bones left in the wake of the bison's systematic slaughter, and to ship them east where they were ground into bone meal fertilizer and bone char.

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[43] I am indebted to Mark Simpson, who first introduced me to the contentious career of William Hornaday.

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[44] Lynne Kirby writes: "In addition to bringing ever more white people, the railroads furthered the damage to nature by driving away buffalo, antelope and other wild game hunted by the Indians. The railroads also contributed to the wholesale slaughter and near-extinction of the buffalo, both by hiring people like Buffalo Bill Cody to supply railroad construction crews with meat, and by encouraging white passengers to shoot buffalo indiscriminately for sport from train windows as they plowed through the West" (*Parallel Tracks; the Railroad and Silent Cinema* 28).

[45] David Dary notes that "the Canadian Pacific Railroad, unlike her sister lines south across the border, played no part in Canada's buffalo slaughter. The Canadian rail line was built after the buffalo were all but exterminated in southern Canada" (*The Buffalo Book; The Full Saga of the American Animal* 117). The Canadian Pacific railroad did operate in the wake of the slaughter, however, to transport countless buffalo bones back east.

The "mimetic machinery" of colonial discourse, in deploying bison as a pathological link to the "Indian," bears an ironic resemblance to that "primitive" magic against which imperialist culture prided itself on having a civilized distance (Taussig 33).[46] I recall, again, Frazer's description of two classes of magic, one operating according to "the Law of Similarity," and the other according to "the Law of Contact or Contagion" (qtd. in Taussig, 47). In contagious magic, two bodies which have been in close material contact – such as "the Indian" and "the Bison" – can be manipulated to conduct affects to one another. It was this contagious logic of communication which colonial power put into material motion through the brutal slaughter of bison. Yet no sooner was indigenous resistance to westward expansion violently emaciated than a sudden reversal in official and unofficial policy announced a new desire to protect bison. As Carolyn Merchant writes in the U.S. context: "With Indians largely vanquished and removed to reservations by the 1890s, twentieth-century conservationists turned 'recovered' Indian homelands into parks, [and] set aside wilderness areas as people-free reserves where 'man himself is a visitor who does not remain'" (144).[47]

In Canada, national conservation efforts for bison emerged in 1877, with the passing of the Buffalo Protection Act. The rendering of bison as dead meat instantly switched into the rendering of bison as tenuous lifeline to pure, endangered nature. A new fervor for conservation seamlessly replaced campaigns of extermination with campaigns of buffalo redemption. The pathological violence of communicating death to native culture by expending bison populations was replaced with a sympathetic ideology of saving animal life. As I will trace, however, a pathological discourse of colonial contact and a sympathetic discourse of postcolonial conservation would often communicate similar effects upon native cultures, albeit through different means.

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[46] As Taussig notes, locating "primitive" mimetic sense in the seemingly rational technologies of the west "disorients the earlier occidental sympathies which kept the magical economy of mimesis and alterity in some sort of imperial balance" (*Mimesis* xv).

[47] The words which Merchant quotes – "where man himself is a visitor who does not remain" – are culled from the 1964 U.S. Wilderness Act.

While the colonial maledictions upon both indigenous people and animals are excised from the oil sands text, a partial history given in the Syncrude Gallery of Aboriginal Culture at the Provincial Museum of Alberta – "Killing off the Buffalo" – reiterates the events which came to catalyze a logic of bison conservation still at work in Syncrude's exhibition of bison in the present:

> Determined to break Native American resistance to western settlement, the Army hired hunters to eradicate the animals on which the people depended for survival. Since buffalo moved freely across the international border, slaughter in the U.S. meant fewer animals in Canada. Some Aboriginal leaders tried to avert the coming disaster. They urged the government to implement conservation measures to protect the remaining herds. An ordinance passed in 1877 proved ineffective. In any case, it was too little too late. The plains buffalo were gone.

Contrary to what is implied by the museum text, however, Aboriginal leaders were arguably little more than token figureheads for a conservationist ideology whose growing political clout toward the turn of the century stemmed from its more powerful advocates in an U.S. high society of masculine power – in the "Teddy Bear Patriarchy" which Donna Haraway links to the early era of conservation modeled by President Roosevelt.[48] The Roosevelt model of conservation was more about playing Indian to protect shifting symbolic and material stakes in North American nature than about a sudden awakening to the concerns of Aboriginal leaders. Big game hunting, scouting and woodcraft movements (in which boys and men mimicked Indian life and lore), private and public collections of species on the verge of extinction, and a feverish desire to be immersed in wild nature (even, as with Roosevelt, when immersion was achieved through a veritable blood-bath of sport hunting and trophy gathering), were some of the contradictory practices constituting the sympathetic biopolitics of "saving" North American nature. Increasingly anxious about the effeminizing effects of their own cultural hegemony, powerful Americans rushed to therapeutically counterbalance the successful imposition of white civilization on the Americas with the antidote of raw nature and the antics of playing Indian. Bison became a vital sign mediating a shift in dominant ideology from mastery of the uncivilized continent to management of its wild remains for the future health and recreation of its ruling white bodies.

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[48] See Haraway's "Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-1936," in *Primate Visions; Gender, Race and Nature in the World of Modern Science* (1989).

While there is no disputing the historic loss of the bison, in reciting a conservationist lament -"the plains buffalo were gone" - text at the Syncrude Gallery of Aboriginal Culture takes at face value a discourse which profoundly occludes conservation's investments in continuing to control the substance and sign of North American nature. An almost identical lament - "Gone forever are the mighty herds of the lordly buffalo"- appears in Roosevelt's *Hunting Trips of a Ranchman; Sketches of Sport on the Northern Cattle Plains* (1885), a text which helped to reconcile a sympathetic ideology of conservation with the pathological acts of white supremacy directly preceding it (259). Roosevelt grieves the loss of a noble animal "race" in *Hunting Trips*, displacing a biopolitical discourse of race and racial control onto a discourse of species and the new mission of nature conservation (265).[49] *Hunting Trips* also offers an authoritative ablution of "the white man," excused for the slaughter of the bison because he wished death not upon the bison, but upon the savagery which fed off of bison:

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[49] Roosevelt describes bison as a "race" of animals, and wood bison, in particular, as the most tenacious "race of this species" (265). "The formation of this race is due solely to the extremely severe process of natural selection that has been going on among buffalo herds for the last sixty or seventy years; the vast majority of the individuals were utterly unable to accommodate themselves to the sudden and complete change in the surrounding forces with which they had to cope, and therefore died out; while a very few of the more active and wary, and of those most given to wandering off into mountainous and out-of-the-way places, in each generation survived" (265, 266). Roosevelt's suspect Darwinian science of the "race" of buffalo marks one site where wildlife conservation enciphers a racist discourse, allowing Roosevelt to frame the cultural dominance secured for white bodies through the political violence of conquest as a process of "natural selection."

> Above all, the extermination of the buffalo was the only way of solving the Indian question. As long as this large animal of the chase existed, the Indians simply could not be kept on reservations, and always had an ample supply of meat on hand to support them in the event of a war; and its disappearance was the only method of forcing them to at least partially abandon their savage mode of life. From the standpoint of humanity at large, the extermination of the buffalo has been a blessing. (267)

Roosevelt's presidential rationale for expending a species in the cause of white cultural supremacy productively contradicts the conservationist logic he promotes; it is a productive contradiction which plays out, in *Hunting Trips*, in the president's sudden shift of attention away from the lamentable specter of "a bleached buffalo skull" on a plain ominously void of living creatures, to the predatorial pursuit of a prize head: the conservationist's mascot (260). The liberal animal acquisitions of prominent figures such as Roosevelt materially contradicted, while symbolically securing, the conservationist doxa that the buffalo had "vanished forever" (*Hunting Trips* 258). In exhibiting no awareness of a contradiction, Roosevelt's narrative itself serves as a technology for rendering the contradiction in his illogical discourse of conservation productive rather than disturbing.

Roosevelt thus seamlessly turns from the morbid sight of a bleached buffalo skull to "the fresh track of a bull buffalo," and begins an account of his carnivorous tracking of a quarry whose interest has radically appreciated thanks to the specie's virtual elimination (277). The ritual of pitting his representative American manhood against a worthy animal adversary (usually the largest male of the "race") – crowned with the capture of a prize specimen whose vitality would be rendered permanent through its stuffing and mounting – becomes continuous with the logic of conservation advocated by Roosevelt. *Hunting Trips* indeed goes on to describe

Roosevelt's dogged pursuit and beheading of "a great bison bull" in "the lusty vigor of his prime" (287). The species which had been systematically wasted to prevent it from entering the mouth of the "Indian" becomes symbolic and literal sustenance for a red-blooded, elite white manhood:

> His head was a remarkably fine one, even for a fall buffalo. [But] he was lying in a very bad position, and it was most tedious and tiresome work to cut it off and pack it out....Buffalo meat is with difficulty to be distinguished from ordinary beef. At any rate, the flesh of this bull tasted uncommonly good to us, for we had been without fresh meat for a week; and until a healthy, active man has been without it for some little time, he does not know how positively and almost painfully hungry for flesh he becomes, no matter how much farinaceous food he may have. (287, 288)

Roosevelt's text naturalizes a logic according to which it *makes sense* that the bison which have irretrievably "vanished" for native culture are still available as trophies and wild game for the great white hunter.

More than the taking of the head, there is Roosevelt's example of eating, of literally incorporating the flesh of the wild. No sooner has Roosevelt justified the slaughter of bison as the "only method" of subordinating a "savage mode of life" than he himself mimics a primitive chase and subsistence kill under the rubric of "sport," salvaging the savage nature of "man the hunter" for an exclusive white manhood. In Roosevelt's prestigious example, the contradictory logics of conserving and consuming an endangered species easily capitalize off of each other.[50] Just when imperialist market culture has ferociously demonstrated its will to be the one mediator of consumption, Roosevelt stages consumption around the campfire as the simple act of sating "man's" primal appetite. However, while Roosevelt's breed of conservationism makes a ritual show of transcending the mass-produced meat of a now dominant market culture, "ordinary beef" is always in complicit reserve, serving even as the founding inverse of his discourse on wild life. Indeed at the apex of Roosevelt's hunting trip - at the moment when a conservationist fetish for vanishing wildlife is being physically consummated - the president lets slide a comment which risks deflating his communion with wildlife: "Buffalo meat is with difficulty to be distinguished from ordinary beef."

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[50] It is no coincidence that mascots of wild life are often mimetically reproduced in "edible" forms, allowing them to be conserved and consumed at the same time: candy animal figurines, "animal crackers," chocolate buffalo droppings, etc. A majority of contemporary conservation discourses also invite citizens to become conservationists through acts of consumption, i.e. buying an acre of rainforest, a sloganized t-shirt, a rainforest chocolate bar, and so on.

Cultural sensors capable of distinguishing buffalo from "ordinary beef" would become increasingly reliant upon mimetic codes distinguishing wildlife conservation from animal capital across the twentieth century. As wildlife management of bison came to materially resemble commercial cattle ranching, conservationist discourses depended more and more upon symbolic constructions of the difference between the "wild" and the "domesticated" to distinguish wildlife from animal livestock destined for slaughter. North America's commercial meat trade, conversely, was able to systematically capitalize off of a wholesale slaughter of domesticated animals in part because livestock was divested of the symbolic value which conservation discourse fetishistically reserved for the fugitive wild.

The buffalo, as it ends up, only "vanished" for those cultures and subsistence economies which the ruling interests wished to eradicate; enough bison survived their fluctuating status as an "extinct," "threatened," and "protected" species across the nineteenth and twentieth centuries to allow their numbers to be exponentially reproduced in postcolonial economies of commercial game farming,[51] and to make it possible for corporations such as Syncrude to purchase "a few dozen head" to function as live mascots (Syncrude, *Aboriginal Review* 31). Signage at "Wood Bison

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[51] According to Environment Canada, an estimated 140,000 plains bison are currently held in "private collections" and commercial ranches across North America (<http://www.cws-scf.ec.gc.ca> April 7, 2003).

Viewpoint" nevertheless invokes wood bison's "near extinction" in order to apportion Syncrude in a share in their heroic recovery: "This near extinction spurred actions to conserve the species, and today there are about 200,000, of which only 2,500 are *wood* bison." Wood bison, less plentiful and thus more fetishized than plains bison, have been recovered with a large enough degree of success to return them not only to nature, but indeed to capital. The duplicit logic of conservation at work in Syncrude's reclamation discourse is not so distant, in fact, from the one dramatized in Roosevelt's text; both take possession of the preserved head as conservation's symbolic capital, and both protect themselves as privileged exceptions to conservation's law against unnecessarily spending the endangered wild. For even as Syncrude cordons wood bison off from commercial life in a performance of conservation, the corporation regularly culls surplus animals from its exhibit herd for exchange within market culture as breeding stock or meat.

A pivotal aesthetic touchstone for turn-of-the-century conservation discourse was the permanent bison diorama constructed for the Smithsonian by an acquaintance of Roosevelt's, William Temple Hornaday. As Chief Taxidermist at the museum, Hornaday was eager to obtain representatives of a species on the verge of extinction for the national collection. In 1886, he formed an expedition to "save" what he claimed were among the last remaining plains bison. Hornaday and his crew killed 25 animals, including the great male bull and the suckling calf which form two of the six taxidermic mounts rendered in the Buffalo Group. The killing of a suckling calf – sign of regeneration rather than extinction – failed to mar Hornaday's budding reputation as savior of the American bison; rather, its inclusion perfected the touching aesthetics of the doomed species. The planning and construction of the Buffalo Group was written up in an in-house report by Hornaday in 1887, later published as part of his

1889 account *The Extermination of the American Bison, with a Sketch of its Discovery and Life History*, and reissued by the Smithsonian Institute Press in 2000.

The Buffalo Group, which opened to an ecstatic public in 1888, was arranged to resemble more of a nuclear family unit than a herd, with the imposing bull as its head. The big stub-horn bull – which served as the "original" buffalo reproduced on several U.S. coin and paper currencies, postage stamps, the seal of the Department of the Interior, and the National Park Service badge - gained wide aesthetic and institutional currency, emblematizing the essence of the American constitution.[52] The sign of the bison transacting a national identification with nature transacted American capital at the same time. The ten-dollar "buffalo-bill" put into circulation in 1901, along with other national currencies stamped with the sign of the bison, undoubtedly also became entwined with financial lexicons describing an anticipated rise in stocks as a "bull market."[53] Hornaday's conservationist practice thus arguably stimulated rather than opposed the growth of commerce, supplementing rather than challenging the rule of the market. That the "original" animal valorized in these early national currencies was a dead skin which Hornaday had stretched over a wood and clay bison mould escaped comment. Rather, the convincing "liveness" (Simpson 93) of the taxidermic specimen was praised by the *Washington Star* in 1888, in an article fascinated by "the huge buffalo bull, the giant of his race" and by the diorama's "real buffalo-grass, real Montana dirt, and real Buffaloes" (qtd. in Shell, "Last of the Wild Buffalo"). Through Hornaday's aesthetic resurrection of literal pieces of nature,

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[52] In *The Buffalo Book, Full Saga of the American Animal*, David A. Dary raises doubt as to just which animal served as the model for the 1901 $10 bill. "Although William Hornaday claimed that the stub-horn buffalo he killed in Montana and mounted for the Smithsonian was the model for the 'Buffalo-bill',Charles R. Knight, the artist, wrote in 1929 that: 'This drawing was done at the Zoological Park in Washington and not from the Museum group'" (ftn. 282).

[53] The origins of the term "bull" market are difficult to trace. Many believe that because a bull attacks by swiping up with its horns, it became a metaphor for rising markets, whereas a bear, which attacks by swiping down, came to represent markets in decline. According to the *Merriam-Webster New Book of Word Histories: Fascinating Stories About Our Living, Growing Language*: "Two terms often used for stock-market traders are 'bull' and 'bear.' A bull is someone who buys securities or commodities in the expectation of a price rise, or someone whose actions make such a price rise happen. A bear is the opposite - someone who sells securities or commodities in expectation of a price decline"(7).

> [t]he Buffalo Group quickly achieved acclaim as a symbol of the early conservation movement and as an outstanding example of the new school of taxidermy of the 1880s and 1890s. Scientists as well as lay people recognized that the group exhibit, with its suggestion of habitat, was innovative both in method and in effect.[54] (Shell)

In 1905, Hornaday was elected president of the newly founded American Bison Society, with Theodore Roosevelt as honorary president. Rendering the "race" timeless and incorruptible through its aesthetic preservation was pivotal to the Society's conservationist agenda. Presiding over the buffalo's disemboweled display while advocating on behalf of a national range where bison could recover some of their numbers was as compatible in Hornaday's creed of conservation as it was in Roosevelt's. What "vanishes" around the turn of the century in their logic of conservation is the material difference between the living and dead animal: the preserved specimen and the protected animal become equivalent representatives of a species whose currency is increasingly epiphenomenal.

When Hornaday's Buffalo Group was dismantled after being on display for sixty-nine years at the Smithsonian, a sealed metal box was discovered buried in the dirt floor of the display case. Inside the box lay a copy of an article written by Hornaday for *Cosmopolitan* magazine (October 1887), entitled "The Passing of the Buffalo." Across the top of the first page was a handwritten note which Hornaday had addressed to the proprietors of the future:

> My Illustrious Successor,

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[54] In "Last of the Wild Buffalo" (*Smithsonian Magazine*, February 2000), Hanna Rose Shell celebrates the fact that Hornaday's Buffalo Group, scattered after its dismantling in 1955, was re-grouped and returned to public display in 1996 at the Museum of the Northern Great Plains in Montana. As Shell notes, the restored mounts are currently exhibited in their original poses. (<http://www.smithsonianmag.com/smithsonian/issues00/feb00/object_feb00.html> March 19, 2003)

> Dear Sir: - Enclosed please find a brief and truthful account of the specimens which compose this group. The Old Bull, the young cow and the yearling calf were killed by yours truly. When I am dust and ashes I beg you to protect these specimens from deterioration and destruction. Of course, they are crude productions in comparison with what you produce, but you must remember that at this time (A.D. 1888, March 7) the American School of Taxidermy has only just been recognized. Therefore give the devil his due, and revile not.
>
> [signed] W.T. Hornaday
> Chief Taxidermist, U.S. National Museum. (qtd. in Shell)

Allowing that the hand of time would reduce he himself to "ashes and dust," Hornaday nevertheless attempts to posthumously buy more time for the American bison, which to his mind means buying time for those specimens he first suspended in a state of mock vitality. Preventing the specimen from deteriorating, Hornaday seeks to extend the "life" of the animal as a pure signifier immune to decay or death, through arts and sciences capable of producing species life as a perpetual exchange-value.

While Syncrude's "Wood Bison Viewpoint" is in many respects historically incomparable to Hornaday's Buffalo Group, a similar logic nevertheless runs through both exhibits, emboldening me to suggest that the duplicit conservationist currency of the Hornaday group has been forwarded through space and time to produce mimetic effects on behalf of a very different culture of capital in Canada's north. As with Hornaday's great bull bison, the live mounts in Syncrude's open-air display embody the aesthetic preference for the giant male specimen established by conservationists and trophy hunters such as Roosevelt and Hornaday. In his study of Syncrude's bison project, Hugh Gibbins reveals that a process of aesthetic selection – he calls it "artificial selection for appearance" – informs the corporation's game management practices (16). "[T]roubling from a conservation standpoint," suggests Gibbins, is the practice by which "some animals (particularly male calves) that are considered underweight for their age or have 'imperfect' appearance characteristics are also designated for culling" (16). Yet while Syncrude's practices work to aesthetically reproduce the giant bull, "[a]nimals prone to jumping, over-aggression, or other traits that are not considered beneficial within the confines of domestic livestock production are actively culled from the herd" (16). In material contradiction to Syncrude's fetishization of the bull's wild nobility in its interpretative discourse, then, is its cultivation of bison's domesticated traits.

Syncrude's bison exhibit is also as skillful as Hornaday's in its "suggestion of habitat." Whereas Hornaday incorporated "real buffalo grass" and "real Montana dirt" into his Smithsonian environment to accentuate the "liveness" of his taxidermic specimens, Syncrude has seeded over its depleted mine sites to reproduce a semblance of authentic bison habitat in the north. Syncrude's investment in the rhetoric of the native species, however, is contradicted by its interest in expediting visible effects of environmental reclamation and symbolic closure. One of the factors informing Syncrude's purchase of 120 animals from Parks Canada in 1997 was the consideration that reforestation of mined sites would mean delayed aesthetic effects, whereas convincing bison grassland-habitat was achievable in a year or two.[55] In insidious contradiction to its conservationist rhetoric, again, Syncrude seeded "Wood Bison Viewpoint" and other reclamation sites with non-native grasses whose extensive fertilization rapidly achieved the "suggestion of habitat" which holds such symbolic currency for the corporation. Syncrude materially contradicts its rhetoric of conservation by favouring quick, introduced species bound to contaminate the muskeg ecology in the North. "As numerous historical examples have shown," writes

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[55] Parks Canada first donated 30 bison from Elk Island Park to Syncrude in 1993, but Syncrude was not able to own the herd – or purchase additional bison – until 1995, "when changes to Alberta's Wildlife Act resulted in wood bison essentially being given the status of domestic animals," with the exception of the "wild" herd in Wood Buffalo National Park (Gibbins 8).

Gibbons, "invasive and introduced non-native species can have unpredictable and potentially devastating effects on local ecosystems" (16). In the spirit of reclaiming the land to the semblance of a native state, Syncrude in fact perpetuates the bio-imperialism, or what Alfred W. Crosby calls the "ecological imperialism," of the colonial era preceding it (1993).[56]

Careless material breaches of the distinction between native and introduced species coexist alongside Syncrude's rhetorical assertions of the "purity" of its bison. Both corporate and national parks in Canada's north are interested in the aesthetic of a native and "pure" wood bison herd. Yet Canada's national investments in an authentic-looking wood bison population involved a series of managerial interventions which, ironically, bred the diseases which haunt the perimeter of "Wood Bison Viewpoint" today. Emplaced to signify the biological health of its reclaimed landscapes, Syncrude's wood bison are ironically prime candidates for infection with tuberculosis. As with the herds in Wood Buffalo National Park, the bison in "Syncrude National Park" best uphold the symbolic value of the native species when the material history of wildlife management which brought them to the corporate paddock is forgotten. Syncrude's bison are carbon copies standing in for the "noble beasts" which text at "Wood Bison Viewpoint" claims ranged freely through the north before the arrival of Europeans, and passing for the real thing only by obscuring the history of their mimetic engineering.[57] Retrieving a sense of the material relays and transfers behind wood bison's return to the north is thus a first step towards de-aestheticizing the native state of nature which both Syncrude and Wood Buffalo National Park strive to recreate. What has erupted to make the material politics of wood bison conservation visible is disease – tuberculosis, bovine brucellosis, and anthrax – introduced by cattle to plains buffalo, and transferred from plains bison to the less numerous wood bison.

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[56] Signage at "Wood Bison Viewpoint" is careful to state that Syncrude's reclamation practices aim to return the land to a "biologically productive" state rather than to an original or native state of nature. However, the installation of a "pure" herd of wood bison has, as I've argued, iconic associations with discourses of native nature which overpower its legally circumspect language.

[57] One signboard at "Wood Bison Viewpoint" reads: "It is estimated that before the arrival of European settlers in North America, there were between 40 and 60 million bison roaming freely. But unregulated hunting and rapid European settlement depleted their numbers to a little over 300 by the mid-1890s." Conservation discourses ritually cite an imaginary abundance of wildlife in pre-contact North America, depicting an "original" nature state as a model for recovery and reclamation efforts. However, as Ed Struzik writes in relation to Wood Buffalo National Park, "there is no convincing evidence to suggest that the area around the national park was ever home to more than a few hundred bison, not the

The Canadian Wildlife Service has been forced to provide a history of the manipulated rather than pure nature of wood bison herds in the north to explain outbreaks of disease in the animal populations of Wood Buffalo National Park. According to a 2001 report commissioned by the Service, the 1877 Buffalo Protection Act was "largely ineffective because of a lack of enforcement" (*National Recovery Plan for the Wood Bison* 12). In the snapshot history provided by the Canadian government on one of its Wildlife Department webpages, it is revealed that the "original" bison in the north today are in fact the product of a series of commercial transactions, animal transplants, and panicked purity controls:

> In 1922, Wood Buffalo National Park was established to provide further protection for the wood bison and its habitat. In 1906, the Canadian Government purchased 709 plains bison from an American rancher in Montana. These bison were shipped to Elk Island National Park and were later transferred to Buffalo Park near Wainwright, Alberta. The protected bison thrived and in 1925-28, 6,673 plains bison were transferred from Buffalo Park to the newly established Wood Buffalo National Park on the Northwest Territories/Alberta border…The transplanted plains bison outnumbered the resident wood bison by about four to one and the two subspecies readily interbred. By 1934 the herd had increased to about 12,000 animals. (<http://www.nwtwildlife.rwed.gov.nt.ca/NWTwildlife/bison/history.htm> April 4, 2004)

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thousands that are being envisioned" ("The Rise and Fall of Wood Buffalo National Park," *Borealis Magazine* 1995 <http://raysweb.net/specialplaces/boreal-articles/woodbuffalo.html> April 6, 2005).

Canada's wildlife agencies admit that the "Wood Buffalo National Park transplant had two unfortunate consequences" (Ibid.). Firstly, "it was thought that the wood bison as a distinct subspecies had been lost" (Ibid.). Wood bison were even declared "extinct" in 1940 due to interbreeding with introduced plains bison. Secondly, "the transplant introduced two cattle diseases, tuberculosis and brucellosis, into an area where they had been previously absent" (Ibid.). After all, the plains bison had originally been purchased from Michel Pablo, a Montana buffalo-hunter turned rancher-conservationist whose breeding stock supplied many prominent national holdings in both Canada and the U.S., including the herd displayed at the National Zoological Park in New York under the directorship of none other than William Hornaday.[58] South of the border in Yellowstone National Park, similar misdemeanors were troubling the U.S. national bison range, which Pablo had also helped to stock.

The Canadian government rushed to remedy the "miscegenation of culture and nature" which it had bred in the eagerness to accumulate a national horde (Seltzer 21). The aesthetic of the "pure" herd was salvaged when, to the gratification of conservation science, an isolated herd near the Nyarling River in Wood Buffalo National Park (WBNP) was sighted, and confirmed to be "untouched" wood bison:

> It was believed that a small population of wood bison persisted in the remote northern reaches of Wood Buffalo National Park that had not interbred with the plains bison.... In 1963, wood bison were captured from the Needle Lake area of Wood Buffalo National Park to establish a captive breeding herd.....This disease-free breeding herd provides founding stock for captive zoo and park herds, breeding ranches and for reintroducing free-roaming populations. (<http://www.nwtwildlife.rwed.gov.nt.ca/NWTwildlife/bison/history.htm> April 4, 2004)

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[58] Michel Pablo, a Mexican-Indian who materially managed the early recovery of wood bison with remarkable commercial success, complicates the discourse of bison conservation surrounding Roosevelt and Hornaday, given the convoluted politics of race, nature, nation, and capital which converge around him. Pablo's career is deserving of far more than the passing mention I give it here.

Syncrude's current herd of more than 300 bison can ultimately be traced back to this "founding stock" and to the conservationist logic surrounding it.

I want to pull into the historic mix, at this point, my contention that conservation discourse can operate as a neo-colonial technique of power, controlling native culture not through a pathological discourse of bison extermination, but by means of a sympathetic discourse of bison protection. That a conservationist ideology more obliquely serves the continued cause of white cultural and economic supremacy in North America is glimpsed, indirectly, in subsistence tactics which cropped up in response to the formation of protected wilderness areas such as Wood Buffalo National Park. In a 2002 report entitled *Status of the Wood Bison (Bison bison athabascae) in Alberta* (2002), the additional constraints which conservation policies and parklands placed upon already severely restricted Aboriginal subsistence practices are inadvertently revealed. The report recalls Aboriginal peoples' tactical use of fire as a means of navigating prohibitions against hunting bison in Wood Buffalo National Park:

> Fire was used by early inhabitants of northern Alberta to maintain meadows prior to the advent of modern forest management. In the High Level – Fort Vermilion area, large areas were still being burned by Aboriginal people just prior to World War II….The most common reason for burning was to provide better forage for herbivores, including horses and bison. *Meadows were burned west of WBNP to attract bison so that they could be legally hunted outside the park.* (my emphasis, Mitchell and Gates 10).

Prior even to the signing of Treaty Eight in the north, an 1896 government statute had been passed to reinforce the 1877 Buffalo Protection Act's ban on the hunting of bison. According to T.A. Ferguson and C. Burke,

> Fort Fitzgerald/Fort Smith people, in agreement with the goal of conserving bison, agreed to this ban but on the understanding that it was to be for only five years. Fort Resolution people signed the Treaty after the Commissioner agreed that the ban

> would not be enforced. After the signing of the Treaty, the ban on hunting buffalo was extended....[and] what was originally intended as a short-term ban on hunting buffalo lasted for some sixty years. ("Aboriginal Communities..." 191, 192)

By 1964, although the "genetic integrity" of a pure population had been salvaged by the Canadian Wildlife Service (*National Recovery Plan* 29), the survival of wood bison remained tenuous enough for them to merit designation as a "protected" species under the Northwest Territories Act. The Act, which prohibits all hunting of protected species, in effect carried on the campaign of "starving" out Aboriginal subsistence practices, which had persisted in spite of the violent impositions of Euro-American market culture. Wood bison would be declared "Endangered" in 1978, and as their numbers gradually increased, "Threatened" in 1988.[59] While Aboriginal residents of Wood Buffalo National Park can currently hunt and trap non-endangered animals, they are still prohibited from hunting wood bison inside the Park. Nor have national parks discourses been alone in obstructing Aboriginal people access to bison. Designated a World Heritage Site by UNESCO in 1983, international interests in protecting Wood Buffalo's iconic herd also hold hegemony over indigenous uses of the bison.

Earlier in the twentieth century, around another showcase herd contained in Banff National Park's Buffalo Paddock (source of a number of "pure" animals given to Syncrude in 1997[60]), conservationist culture cultivated not only a symbolic but also a literal appetite for wildlife through a symbiotic play of conservation and consumption. Beginning in 1907, international visitors to Banff's annual "Indian

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[59] The Committee on the Status of Endangered Wildlife (COSEWIC) still lists wood bison as a "threatened" species.

[60] When the Banff Buffalo Paddock shut down in 1997, Parks Canada gave 10 wood bison to Syncrude, asking only that the corporation make a donation to aid research in Elk Island National Park. The gift economy unofficially linking national and corporate conservation discourses meant that the exchange remained undocumented. It was confirmed, however, in my phone interview with Jack Peden, one of two Syncrude employees involved in the National Recovery Plan for the Wood Bison (April 22, 2003).

Days" event were witness to the ethnographic spectacle of natives in traditional costume "hunting" buffalo, a wild mimicry consummated with the butchering, cooking, and serving of buffalo meat to appreciative white tourists (culled from the Paddock compliments of Parks Canada). More insidious than its staging of dichotomous rituals of "saving" and "spending" the wild, the Buffalo Paddock engaged native actors in the performance of an imagined authenticity yet excluded them from the consummation offered tourists: bison flesh was usually reserved for the white palate, while native players were inconspicuously served "substitute beef" (Drees 64).[61]

Syncrude's "Viewpoint" – reminiscent of Banff's Buffalo Paddock in its staging of indigeneity for tour-goers – continues to place bison under aesthetic detention and to prevent them from circulating within cash-subsistence economies in the north. "Partners" in Syncrude's reclamation project in title alone, members of the Fort McKay First Nation must book in as tourists when they want to see the herd at "Wood Bison Viewpoint."[62] "Periodically, if the community expresses interest, Syncrude provides buses to allow structured visits to the north mine grazing area," notes Gibbins (13). Every once in a while, Syncrude honours the rhetoric of collaboration by throwing the Fort McKay community a literal bone to chew:

> Syncrude also occasionally releases inspected wood bison carcasses to the community following accidental deaths of animals on the ranch (the distribution of meat and animal parts is left to the community). Such distributions are very rare. As a result of objections by community members that the bison meat they were receiving was 'accidental' rather than selected, the ranch manager has begun selecting 'prime' young animals

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[61] As Laurie Meijer Drees writes: "Despite the butchering spectacle put on for the benefit of the Banff visitors, which occurred in the fields near the Indian village, the buffalo meat was not always consumed by the Indians. Instead, they were quietly provided with substitute beef following the 'rationing' of the buffalo meat" (*Making Banff a Wild West: Norman Luxton, Indians and Banff Tourism, 1902-1945*, 64).

[62] Gibbons notes that "Syncrude, and not the community, literally owns the bison, and is entirely responsible for funding all aspects of the project" (19).

> for slaughter and use by the community. (Gibbins 11)

This sacrificial appeasement to its rhetoric of collaboration with Aboriginal people also masks the commercial infrasense of Syncrude's conservation project: "Approximately 40-50 young bison are auctioned at public bison auctions each year, and older animals are slaughtered and processed by a local meat packer. All sales of bison and bison meat are administered entirely by Syncrude" (Gibbins 11). Integral to Syncrude's restoration of wood bison to their original historic range, in other words, is the regular cashing in on the exchange-value of surplus animals, minus the one or two symbolically sacrificed to subsistence. By foregrounding its collaborative partnership with a First Nation on the tour, furthermore, Syncrude encourages the ethnographic fantasy of an undying, mythological connection between the "Buffalo" and the "Indian" which deliberately refuses to allow that animals and Aboriginals inhabit historical rather than eternal relationships. As Gibbins notes, Fort McKay residents already suspicious of Syncrude's superior stakes in the project joke that they would have preferred a moose to a bison project:

> [A]s a result of the 100-year absence of wood bison from local ecosystems and a strong familiarity among Fort McKay community members with moose hunting and processing, wood bison are not singled out for inclusion in day-to-day or seasonal spiritual and religious ceremonies or practices….The specific spiritual and religious significance that community members may have associated with the animal in the past therefore no longer exists, although bison are still encapsulated within the band's holistic spiritual connection to the land. (12)

The mimetic duplicity of Syncrude's reclamation discourse thickens, then, when it is seen that the conservationist prohibition on hunting bison which forced many Aboriginal people to devise new practices around alternate species and sources of economic wealth, is erased from a reclamation discourse which attempts to fix in place the timeless unity of "buffalo" and "Indian."[63] Moreover, the conservationist prohibition on a commercial traffic in endangered species has never fully applied to the white social and economic elite represented by Roosevelt, Hornaday, and now Syncrude. The conservationist prohibition against economically exchanging upon wildlife protects the privileged transactions of private capital as its founding exception, while criminalizing Aboriginal practices.[64]

Yet colonial and neo-colonial practices of using bison as a pathological, and subsequently sympathetic, tool of power threaten to boomerang back upon white cultures of capital in the present: the "pure" bison in Wood Buffalo National Park, whose recovery from near extinction is heroically mimicked by Syncrude at "Wood Bison Viewpoint," return as "transmitters of disease" to endanger animal capital (Ferguson and Burke 195).[65] Syncrude claims that as a bison steward, it will keep disease out of its corporate corral. The sheer clout of Syncrude capital has indeed enabled it to so far prevent tuberculosis from pathologically tainting the symbolic capital of its "pure" native species. Yet the specter of disease hovers as a material sign of "mimetic excess" in the oil sands text, forcing bison's material and symbolic overdeterminations into view and thus turning "mimesis… on itself" in ways which threaten private capital's talismanic stakes in the native species (Taussig 252). At the very least, the wasting diseases which hover over the herds in Wood Buffalo and "Syncrude National Park" prevent the complicit discourses of animal conservation and animal capital from successfully effacing their historical entanglements with Montana livestock, and hence are a reminder of the material politics of animal signs.

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[63] In an article posted on the (U.S.) National Humanities Centre's web site, "Buffalo Tales: the Near-Extermination of the American Bison," Sheppard Krech III provocatively remarks that "…in today's changing economy, when many Indians talk of the return of the buffalo, they mean not the animal but casinos." (<http://www.nhc.rtp.nc.us/tserve/nattrans/ntecoindian/essays/buffaloc/htm> March 22, 2005).

[64] In his analysis of a 1990 federal panel put together to decide the fate of wood bison infected with tuberculosis in Wood Buffalo National Park, Ed Struzik writes: "Throughout the review process, representatives from the native communities in the Wood Buffalo area had sat mostly in silence as a succession of non-native witnesses from the Canadian Cattle Commission, the World Wildlife Fund, the Alberta government, and other organizations stepped up to the microphone, essentially telling them that slaughter [of the wood bison] was in their best interests. Those native leaders who did say their piece, spoke bitterly of a long history in Wood Buffalo in which their interests were constantly being cast aside to accommodate other priorities. They told of Cree, Chipewyan and Metis hunters who were fined and jailed for daring to hunt bison that they had always hunted in order to feed their families…" ("The Rise and Fall of Wood Buffalo National Park," *Borealis Magazine* 1995 <http://raysweb.net/specialplaces/boreal-articles/woodbuffalo.html> April 6, 2005).

[65] T.A. Ferguson and C. Burke note that it was in a 1990 proposal by Agriculture Canada to slaughter the entire wood bison herd in Wood Buffalo National Park (because of their infection with tuberculosis and bovine brucellosis), that the animals were described in pathological terms as "transmitters of disease" ("Aboriginal Communities and the Northern Buffalo Controversy" 195).

Second and Third Stops: "Giants of Mining" and "Chrétien's Point"

To subvert the aesthetic closure designed into the loop of Syncrude's tour, I end with the two middle stops planted inside its Mildred Lake complex. At "Giants of Mining" and "Chrétien's Point," bison mascots are nowhere to be seen. Instead, the technology of the tour de-politicizes economy-of-scale production by presenting scale itself as more of a playful wonder than a material sign of power.

On monumental display behind chain-link fences at the second stop on the tour are two of Syncrude's machine "giants" –the *Discovery* dragline and a bucketwheel. At this site's central pavilion tour-goers are, as at the welcome gate, greeted with fossil remains. Here, however, fossilized specimens are displayed next to massive industrial machinery, a juxtaposition which works to render the latter seemingly continuous with the deep forces of natural history:

> Syncrude has uncovered the fossilized remains of several sea creatures at the Mildred Lake site such as the ichthyosaur, a dolphin-like creature, and the plesiosaur, a sea serpent….. Other fossils found at the Syncrude site may be seen at the Royal Tyrrell Museum of Paleontology in Drumheller and at the Provincial Museum of Alberta in Edmonton.

Industry "giants," displayed alongside creaturely predecessors of this sort, appear to have biological rather than industrial lineages and motor functions. The exhibit encourages the idea, that is, of a "natural history" of machines. On display in a central pavilion is a cross-section of a dragline's immensely thick electrical cable, strongly suggestive of a biological cutting of an animal or plant structure. Through the site's interpretive linkage with the famous dinosaur bones on display at the Museum of Paleontology, the colossal draglines and bucketwheels on display at Syncrude's "Giants of Mining Exhibit" take on an appearance of exoskeletons belonging to a prehistoric family of animal life.

One plaque at this site tells tour-goers that Syncrude's *Discovery* dragline was "retired" in 2001, when the "Giants of Mining" exhibit first opened; its "retirement" suggests that it is now an obsolete machine, commemorative of a past industrial age. Yet identical draglines remain in working order at Syncrude.[66] There is little empirical difference in the industrial function of the bucketwheel and dragline retired from duty at this stop on the tour and the "mobile mine fleet" actively at work further up the road (Syncrude, *Annual Report* 21). However, by differentiating retired exoskeletons of the industrial past from its current mobile fleet, the "Giants of Mining" exhibit arguably attempts to ideologically slough off the material scales of heavy industry, and to begin pre-emptying out the ramifications of the industrial economy which tour-goers will view in full swing at "Chrétien's Point," ramifications now subtly retired, i.e. displaced, onto an industrial past.

The linkage Syncrude makes at this site with the Royal Tyrell Museum of Paleontology in Drumheller, and with its world-famous reconstructions of dinosaur skeletons, articulates oil sands development to a popular science archive teeming with extinction theories around the planetary event responsible for the annihilation of the dinosaurs. The invocation of the popular science of dinosaur exctinction also arguably helps Syncrude to mimetically manage the meteoric impact of mining capital, and to disown the environment as a catastrophic product of industrial capital. The site's paleontological resonances hint that, like the extinction of the dinosaurs, the environmental impact of the oil sands should be understood within the framework of a natural history of earth and an inexorable series of planetary impacts. In other words, the fossil exhibits at this stop on the tour serve, in combination with other points in the oil sands text, to accumulatively naturalize the material politics of Syncrude's industrial impact. What gets naturalized are the material politics of carving out a devastating ecological event upon the north as outer space. Indeed, the *Discovery* nomenclature fuses a colonialist code of exploration (representing indigenous lands as void and open to experiment) with a space-age expansionism avid to stake a claim on post-planetary resources and real estate. It comes as little surprise that Syncrude collaborated with the Canadian Space Agency in developing oil sands technologies, including its fleet of satellite-guided trucks.

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[66] As its 2001 *Annual Report* indicates, the dragline and bucketwheel will continue to be industrial actors at least until 2005: "In 2005, the southwest mine quadrant at the Mildred Lake mine will be exhausted, at which time Syncrude's last operating dragline and bucketwheel will be retired" (17).

En route to the north quadrant of its Mildred Lake mine and to the third stop on Syncrude's tour – "Chrétien's Point" - the tour guide draws attention to a passing "Titan," a truck which waters down mining roads to control the dust. The Titan slows as it approaches a stop sign more than double the normal size, enlarged so that equipment operators will see it from inside of vehicles several stories high.[67] Like fables of political reconstruction – fictions of an occupied city awakening to find that, overnight, familiar street signs have been overwritten with the names of new party members – a sense of being trained into a new perceptual regime intensifies during the approach to "Chrétien's Point." Of all four stops made on the tour, this is the only one "inside" an operative industrial installation. The boundary of "inside" and "outside" is not only hard to detect, however, but profoundly arbitrary, given that capital's scale of resource production involves a dramatic exteriorization of Fordist factory space: vast plots of the earth's surface and subsurface now host industrial installations. Bused around Syncrude's plant before being discharged upon the very lip of its north mine, tour-goers pass a building complex with giant machine shops. What look like enormous, empty movie reels once held conveyor belting which, along with hydrotransport pipes, serve as the exteriorized moving lines carrying loads of bitumen to separators and refineries. Behind the buildings are mountainous sloping stacks of solid yellow sulphur - the guide calls them "pyramids" – a by-product from the processing of crude. Everything, not just the stop signs, has suddenly monumental proportions. Since no people are visible in the complex, the body which stands in as a normative reference point for the engorged economy-of-scale is the GM half-ton truck. Not only are there 600 GM trucks at this location, the guide tells us that there is an on-site GM auto shop. I will return to the political repercussions of the usurpation of the human form by the commodity form (in the shape of the GM truck) as a reference point for scale.

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[67] As the tour-guide puts it, driving a 793 CAT is like "driving your three-story house from your third-floor bathroom." The oil sands text continuously draws analogies between the scale of its political economy and the scale of a domestic economy, encouraging a sense that a capitalist economy-of-scale is merely an extension of the home. Videos and displays at the Oil Sands Discovery Centre compare a cyclone feeder to a "giant toilet bowl," and the bituminous residue reduced out by a fractionator or "frac tower" to the "burnt stuff in the bottom of a frying pan."

An aura of hyperreality is heightened by the disappearance of benchmarks off of which to comparatively measure capital as the tour follows the road past Syncrude's built complex and toward the seeming pulpit of industrial reality – the open pit of the north mine itself. Ironically, tour-goers are invited to inhabit the perspective of the Prime Minister of Canada at "Chrétien's Point," as if to sprinkle a nationalist benediction over the industrial mega-project. The sovereign nation is positioned as a spectator to transnational resource capitalism in a regal but empty gesture. The "great energy conglomerates answerable to no government or nation"

(Pratt, *Tar Sands* 23) make a mockery of the sovereign approvals of nation-states, while keeping a nationalist symbolics in reserve.[68] The corporate rule of scale being minted at Mildred Lake announces the sovereignty of transnational capital to and through the figure of the sovereign nation. In this sense, Syncrude mines the "productive illogic of a nationally grounded transnationalism" (Simpson 97).[69]

In *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*, Susan Stewart claims that "experiments with the scale of writing" – whether enlarging or miniaturizing - "*exaggerate the divergent relation between the abstract and the material nature of the sign*" (my emphasis 43). Within the capitalist economy of amplified returns which pursues scale as an infinitely plastic sign, "the real world is miniaturized or giganticized in such a way as to test the relation between materiality and meaning," to borrow Stewart's words (57). According to Stewart, the exaggerated divergence between materiality and meaning which both miniaturization and gigantism perform is realized, under capital, as the sovereignty of exchange-value over use-value. "Under a use-value economy," writes Stewart,

> exaggeration takes place in relation to the scale of proportion offered by the body….Yet once the abstractions of exchange are evident, exaggeration must be seen in relation to the scale of measurement, and thereby the scale of values, offered by a more abstract domain of social convention – and that social convention achieves its ideological force by virtue of the powers of authority. (xiii)

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[68] While oil sands operations fall within the provincial boundaries of Alberta, and are ostensibly subject to provincial legislation, Canada's federal government legislates those aspects of the oil sands which "transcend" provincial boundaries. The federal government has jurisdiction not only over Aboriginal Affairs, but also over air and water emissions. Canada's ratification of the Kyoto Accord in 2002, and the federal government's call for a nation-wide reduction in Greenhouse Gas Emissions, is an action on the part of the State which risks placing limits upon and thus antagonizing the unlimited powers of oil supermajors (yet which simultaneously diffuses that risk by providing the global loophole of the emissions trading policy, through which even environmental damage becomes an exchange-value).

[69] Simpson theorizes this illogic as securing "the common health of the white body along the lines of commerce," an illogic which is as much a feature, arguably, of twenty-first century global culture as it was of the turn-of-the-century North American traffic in nature examined by Simpson ("Immaculate Trophies" 97).

The "powers of authority" overseeing Syncrude's north mine have instituted just such an arbitrary system of scale, one designed to realize maximal returns on capital. The gigantism of "Chrétien's Point" – from the stop signs, to the mammoth earth-movers, to the staggering size of the open pit itself – thus bespeaks "abstractions of exchange" specific to capital.

Syncrude has provided various mimetic apertures which inadvertently, as it were, manipulate effects of miniaturization and gigantism at "Chrétien's Point." The tour bus pulls up alongside a viewing platform near the edge of the north mine, under whose canopy are installed a pair of viewfinders. Shaped like telescopes, they signify that tourists should take not a near-sighted view of the crater before them, but rather shoul visually scope the scene like one scans the night sky for distant constellations. Indeed, rather than bringing far-off details of the massive mining scene closer, as they promise to, the viewfinders provide a blurry and unfocused picture of the pit. As mimetic aids, they produce a fuzzy view of a nebulous crater, perpetuating a sense of alienating distance from the north mine which heightens its resemblance to a moonscape. The viewfinders, that is, accentuate the already inassimilable quality of the environment carved out by Syncrude's hardware, and aesthetically situate the oil sands' economy of power at the mythological frontier of deep space.

Yet if tour-goers are encouraged to constellate the oil sands with space exploration by inhabiting the perspective of an earthling gazing at unfathomable gigantism, the mimetics of "Chrétien's Point" just as easily reverse, and enable tour-goers to inhabit the perspective of an extra-terrestrial gazing down at a miniaturized earth from the vantage of outer space. Indeed an uncanny miniaturization effect – of automaton diggers and haulers playfully trucking around a child's sandbox – is just as productive of the ideological sense that capital is made on the mythological frontier.

The "insistent denial of history and context" is an ideological feature of the miniature as well as the gigantic, according to Stewart (65). The suspension of history and context is unrelieved at this stop on the tour: apart from the tour-goers, the human body, and thus the normative referent of scale, has been evacuated from the work site of the north mine. Human workers have disappeared inside the giant machinery abstractly operating in the pit. Stripped of their prosthetic machine-bodies, workers would literally be at peril at the north mine; as representative of the proportions of use-value, they have also been figuratively overridden. The "sport and ostentatious virility" of working class body-men has been transferred to the prosthetic superbodies of the world's largest articulated dump trucks and diggers (Balibar 324).[70]

Because labourers are no longer visible (only their prosthetic superbodies), and because the human figure filling in the hole left by the pedestrian worker is that of the tour-goer come to consume the scene, work gets overwritten by play at "Chrétien's Point." Without the worker as a baseline off of which to take a measure of the "social convention[s]" (Stewart) of economy-of-scale production and of the order of labour authorized by that scale, trucks and diggers begin to look like automatic toys bustling around a model set. Built to massive scale without any of the "eurhythmic" adjustments (i.e. foreshortening) which Erwin Panofsky suggests are necessary to achieving a sense of "optical naturalism" in scale artworks, the machinery thus has a "planar flatness" (58). In formulating a theory of proportions, Panofsky claims that a renunciation of "that apparent extension of the plane into depth which is required by optical naturalism" results in the "geometrical quality," for instance, of monumental Egyptian sculptures (58). The planar quality of Syncrude's giant machinery has an aesthetic effect of disavowing the literal depth of field gouged out by its diggers. The optical effect of its economy-of-scale installation is that of a flattened, two-dimensional landscape. Mathematically reproduced scale models of machinery unmodified by foreshortening or depth of field – barging like the battery-operated about a landscape void of the human worker as a benchmark for the social conditions and effects of industrial production – appear, uncannily enough, as toy miniatures.

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[70] As Etienne Balibar claims: "That the body-men are men with fragmented and mutilated bodies (if only by their 'separation' from intelligence) means that the individuals of each of these types have to be equipped with a *superbody*, and that sport and ostentatious virility have to be developed" ("Class Racism" 324).

The diminishment of work and the miniaturizing effects of "Chrétien's Point" are accented, furthermore, by mimetic hints of the school playground, in the shape of large rubber tires half-embedded alongside the tour road and beside the viewing platform. As a functioning machine part which gets recoded and recycled as a fun-feature in North American playgrounds, the tire does double duty in cultures of capital; it enciphers both ideologies of work and of play, running them together to perpetuate the closed loops of capital. Tires are also evocative of landfill sites and recycling stations, lending the scene of resource extraction something of a post-consumer aura of waste management and recovery. Prominent at "Chrétien's Point," too, is a single gigantic tire propped up to form an aperture through which tour-goers are invited to view the mine; it is a popular "photo op" at this stop on the tour. A machine part frames a perceptual measure of the industrial whole in the incestuous mimetics organizing a sense of scale at the north mine.

Syncrude's arrangement of tires thus mimetically associates its north mine with the harmless playground or sandbox, collapsing the difference between the nature and labour of oil sands capital, and children's field of play. The site's resemblance to a sandbox encourages tour-goers to structure their recreation time around "playing" at capital, fantasizing themselves owner-operators of industrial capital by indulging its resemblance to a boy's mechanical model set. The sandbox is also an insider trope in the oil sands text: in a special 2003 magazine issue of *Pure Energy* celebrating Syncrude's twenty-fifth anniversary, Suncor Energy Ltd. contributed an ad featuring a toy bucket and shovel, with the words: "From our side of the sandbox to yours, congratulations on your 25th anniversary" (29).

One of the ideological ramifications of the mimetic effects which perceptually render heavy industrial machinery homologous to model toys is the suspension of mining capital in a time of speculation. After all, models – architectural models especially bring this into view - are previews of a construction which will be realized to scale in the future. Toys mimic, in the domain of play, that which will take on serious properties in the child's future as a working adult. The hyperreal sense that the impact of Syncrude's north mine is not yet seriously manifest is enabled by the model-likeness of the machinery, a sense which allows for the de-materializing notion that the site is yet speculative. The model-likeness of the mine seems to put off the dirty work of extraction to the future, and in effect defers political agitation to the time when speculation becomes reality.

The toy, as Bill Brown claims in his study of turn-of-the-century American childhood, "manifests an economic fantasy" ("American Childhood…" 445). The tour, which visitors sign up for at the Oil Sands Discovery Centre in Fort McMurray, physically loops toy models and their gigantic twins together within the closed "economic fantasy" of oil sands discourse. For at the Discovery Centre, the gymnastic ability of capital to shrink or expand scale (flexing exchange-value's ostensibly unlimited prowess as an abstract signifier) is enacted in a display for children: "Rent-a-Truck." Children are invited to play with Tonka plastic miniatures of actual oil sands machinery, but not for free; as well as fantasizing themselves inside the virile machinery of mining capital, they are given a miniature lesson in exchange-value through the "rent" transaction. "Rent-a-Truck" represents "a market economy restaged in the realm of recreation" (Brown 460). An ideology of sexual difference pervading the oil sands text – not to mention the racial and class differentials produced over the course of Syncrude's tour – gets shrunken and packaged in the "boy economy" of the industrial toy (Brown 461). In the gift shop at the Discovery Centre similar miniatures are for sale, including models which must be assembled, such as an "Oil Sands Dragline Kit." If the model-like quality of the machinery at "Chrétien's Point" is to some degree an accidental but advantageous effect which softens the perception of (and diverts political agitation in response to) mining's material impact, the miniature machinery on sale and display at the Discovery Centre suggests that oil sands capital also intentionally maps a toy economy onto the industrial economy to strategically downplay its immense power.

I end this chapter, finally, with a hallmark photograph of the oil sands, reproduced on postcards and sold at the Discovery Centre as a memento of the scale of the oil sands industrial economy. On the postcard, a virile trinity poses against the backdrop of an open mine: a white male worker, a GM half-ton truck, and a colossal CAT 793 (see Figure 8). The photo, which shows the worker standing in between the GM truck and the CAT 793, works comparatively to calibrate the identity and difference of the human and machine bodies. Especially in the disproportion between the man-sized worker and the "massive 240 ton heavy hauler," as the CAT is described on the back of the postcard, the visual measure and pleasure of its scale rendition is disseminated. The abstract logic of exchange-value driving the scale of Syncrude's giant machinery looms, in reified form, over the universal white "man-standard" of canonical humanist ideology (Deleuze and Guattari 291), albeit here, in his coveralls and hard hat, the man represents that more ambiguous if nonetheless romanticized class of enduring humanist spirit associated with the stoic workingman.

The line which the photograph invites the eyes to trace across worker, truck, and CAT, creates a circuit of analogy which suggests that despite their scale differences, the three are linked by a common essence and purpose. Yet the anthropometry which reassuringly aligns the machinery of capital with the humanist spirit of the male worker (who appears to be their controller-operator), is no guarantee against the equally possible substitutability of the three bodies which suggests, contradictorily, an indifference toward the humanist man-standard. It is just as possible to read abstract capital as the common essence of the trinity, that is, as it is to view the machinery as "extensions of man," in the words of Marshall Mcluhan (1966); in each body it is capital which can be discerned in its different incarnations. While the postcard helps produce a perception that capital's industrial prosthetics are in the instrumental service of humanist man, then, it also gives contradictory glimpse into the disproportion and disconnect between a human-centred ideology and the increasingly outsize material scale of industrious capital.

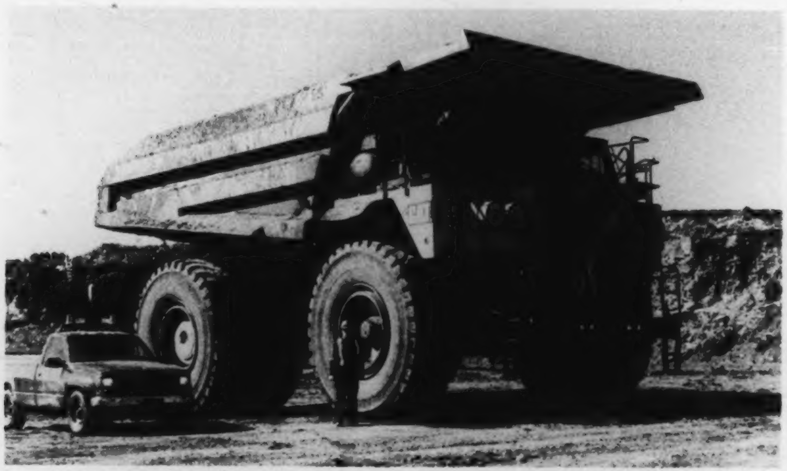

Figure 8. Postcard sold at the Oil Sands Discovery Centre. Photo courtesy of Syncrude Canada Ltd.

The photo accommodates the contradiction between an anthropometry working to humanize the capitalizing machinery of the oil sands, and a capitalist economy-of-scale which invariably belittles the human worker. The CAT 793 brings into view a post-human force of capital which dangerously, yet productively, exceeds the humanism of market cultures. What the postcard thus gives glimpse into is the long-standing tension between capitalism's humanist ideologies and its material conditions and effects. Rather than disruptive, this chronic contradiction within capitalism has proven to be historically productive. Industrial capitalism has arguably always operated in the space of contradiction between humanist ideologies and post-human technologies which make "man" subsidiary to capital's material means and ends. In *The Communist Manifesto*, for instance, Marx and Engels claimed that the worker becomes a mere "appendage to the machine" within capitalist relations of production, in material contradiction to the humanist logic supporting market life (68). Marx's theory of commodity fetishism, moreover, describes how commodities turn into the charismatic deities which their abjected human makers worship. In his theory of commodity fetishism, Marx discerned that the possession of subjectivity and spirit was no longer exlusive to "man" (as he, in his own humanism, would have liked), but was now also the mock property of fantastically spirited commodities.

In tracing how cultures of capital work opportunistically to render contradictions profitable rather than perturbing, it is crucial to consider the productive illogic by which a post-humanist ideology paradoxically become the means of furthering anthropocentric cultures of capital. This productive illogic between capital's intrinsic anthropocentrism and its increasing deployment of post-humanist rather than humanist figures and forces can be glimpsed in the postcard's rendition of scale, which symbolically grants the human figure centre stage in the oil sands scheme of things *and* literally belittles him within an anthropocentric economy of power materially outstripping the measly measure of "man."

Consider the GM truck in the photo, a species of machine power which supplants as much as it serves the "man-standard" by replacing scale measurements based on the human body (i.e. the "foot" in the imperial measurement system) with the abstract measure of a commodity-form. Throughout the oil sands text, the scale of heavy equipment is measured in terms of truck units, signaling an economy of power which no longer deferentially references the human body. Instead of measuring the scale of its operations in numbers of "hands high," the Syncrude tour-guide continuously provides tour-goers with a sense of scale by measuring equipment in terms of "trucks high." If the GM half-ton is the unit which now measures the scale of the 240-ton heavy hauler flanking it on the right, it also redefines the value of the labourer on its left in terms of "horsepower," the magnitudes which interest capital. The human worker becomes, in his articulation with the commodity-form, nothing more than another personification of capital.

As for the CAT 793, the assuaging message of the photograph would seem to be that this prosthetic hulk is steered by the humanist values incarnate in its male operator. The contradiction which the photo also gives glimpse into, however, is that the human is no longer emblematic of the spirit of the oil sands. In the CAT 793, capital has become-animal and taken up the human operator not as its master-controller, but as a mere appendage to the animal drive of capital. The animality assumed by capital is notated in the name of the "Caterpillar" itself, an instinctive biology promoted from its place as lowly grub, in the humanist order of things, to its inflated metaphorical and material status as giant earth-mover in a capitalist economy-of-scale. The machine-animal integer – "CAT 793" – marks the site of a biopolitical discourse operating in productive contradiction with capitalism's profound anthropocentrism.

Capital becomes post-human when it begins to identify its power and its progress, its means and its ends, with "life itself." Life as the ultimate object of biopower not only exceeds the lines of absolute difference which humanist ideology seeks to establish between human and animal nature, in Foucault's opinion it is the latter which is most emblematic of the biopolitical object: "life," he claims, "…is expressed in the form of animality" (*Order* 276). The CAT 793 thus deserves to be taken seriously as a material sign of the biopolitical drive of capital, a sign whose scale dangerously (yet so far, productively) amplifies contradictions between capitalism's anthropocentric precepts, and a post-humanist animality through which it seeks to articulate an all-pervasive and organic hegemony.

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> - <www.animaltelepathy.com> (April 2004)

Introduction

Over the course of the 1780s in Bologna, Italy, an anatomist and obstetrician by the name of Luigi Galvani standardized the practice of inducing electrical reflexes out of severed frog legs to demonstrate his theorem of animal electricity.[1] In *Commentary on Electricity* (1791), Galvani claimed that frog muscle was "the most sensitive electrometer yet discovered" (80), albeit one carved out of the bottom half of a "headless frog" (27). The doctor's method of reliably arranging the raw material of his "animal conductors" (31) in a fashion which guaranteed repeatable results to any who modeled it quickly gained renown as "the Galvani preparation," a standardized production of animal specimens which he visually reproduced in drawings of his electrical laboratory. Galvani's etched and written records of his method remain an inadvertent concession to animal sacrifice as a founding condition of electrical communication:

> We placed some frogs horizontally on a parapet, prepared in the usual manner by piercing and suspending their spinal cords with iron hooks. The hooks touched an iron plate; behold! A variety of not infrequent spontaneous movements in the frog (xi-xii).

Electrical communication conducted through animal flesh – the involuntary physiological convulsions with which Galvani rendered "spontaneous movements" a powerful mimicry of life – reappears as a potent technological trope at key moments in subsequent electric and electronic discourses of the west. "In its most basic manifestation," writes Akira Mizuta Lippit in *Electric Animal: Toward a Rhetoric of Wildlife*, "electricity determines the currency of technological communication" (190). In this chapter, I place Galvani's animal conductors within a cluster of telecommunications media mobilizing the even more specific currency of "animal electricity." I will call the technologies in this cluster "telemobiles." From critically touring an industrial mobile, I now turn to engage a mimetic complex hinging upon the monstrous normalcy of Galvani's frog legs, exposed nerves and tendons twitching with the sign of electrical life. The rendering of the animal body as the "first metaphor" and first media of technological communication informs each of the scenes of telemobility that I develop in what follows (Berger 5).

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[1] As Robert Montraville notes in the introduction to his English translation of Galvani's *De Viribus Electricitatis In Motu Musculari Commentarius* (Commentary on the Effect of Electricity on Muscular Motion), while Galvani was the first to popularize experiments using frogs, he was not the first to study animal electricity: "…a few years before, in Bologna, Floriano Caldani (1756) and Giambattista Beccaria (1758) were able to demonstrate electrical excitability in the muscles of dead frogs" (xi).

First, however, just what is "telemobility"? Telemobility flags discourses which identify technological mobility not with animals' terrestrial or physiological prowess, but with their seemingly spontaneous discharge of affect and powers of sympathetic communication. While animals have been systematically denied *logos*, in *Electric Animal* Lippit takes up a host of western thinkers who have nevertheless been more than willing to attribute to animals a quasi-magical power to communicate with other bodies over long distances, through the enigmatic transmission of affect. From Galvani's scientific theorem of animal electricity and Franz Anton Mesmer's experiments in animal magnetism, to Sigmund Freud's configuration of the unconscious as a terrain of animal drives and Joseph Breuer's configuration of hypnoid states, the communication of animal affect is configured as an invisible exchange whose effects, however, can be all-too tangible. In his study of sympathetic communication in *Mimesis and Alterity*, for instance, Michael Taussig tells of sorcerers who are able to cause pain and even death to another body by manipulating an effigy made in its image or name. Marveling at what he calls the "magic of mimesis," Taussig invites belief in sympathetic communication as an anthropological mystery (13). Yet the sorcery of Galvani, who also invited wonder at the mystifying power of invisible "animal spirits" to trigger muscular movements in lifeless frog legs, depended upon rendering the material machinery of the trick unnoticeable, emphasizing the *magic* rather than the technological *means* of his discourse of sympathetic communication (68). In articulating with a magical discourse of animal affect, "telemobility" thus mystifies the social, political, and technological powers which make a traffic in long-distance communication possible (not to mention profitable) for cultures of capital.

Up to this point in my dissertation, I have analyzed automobility and industrial mobility as effects of analogue-based discourses and technologies of mimesis. Analogue technologies of mimesis are productive of an ensemble of effects which can perhaps be condensed under the rubric of "fidelity" as a measure of the faithful imitation. Telemobility, however, makes intensified mimetic claims to surpass mere faithful imitation of animal life in pursuit of the more totalizing effect of becoming-animal (an effect increasingly generated by algorithm-based or digital rendering technologies and discourses). Augmenting analogue techniques and discourses invested in producing relations of faithful resemblance between so-called originals and copies, telemobility produces the effect of an invisible, spiritual correspondence between heterogeneous things. Channelings, divinations and séances, resurrections of the dead, spontaneous regeneration, and telepathic sensing between bodies on sympathetic wavelengths, constitute the occult aura of exchangeability excited by telemobility discourse. The telemobility effect currently accruing to electronic and digital technologies of mimesis, in particular, has tremendous ability to occult inherited material objects and fields of capitalism, heightening automobiles' effect of animal immanence by implanting them with telematic sensors and capabilities, for instance, or spiritualizing heavy industry by digitizing the text of its operations. Capital's mimetic pretensions to becoming-animal intensify in the telemobility discourse driven by digital and electronic reproductions and their hyper-fidelities; the lifelike effects which the new technological media are capable of producing exceed even the convincing imitations of life achieved through analogue techniques.

While telemobility's effect of spiritualistic communication across daunting distances and seemingly insurmountable differences is ritually associated with global capitalism in the present, it is already evoked, as I've suggested, in the early electric connections which Galvani called up through the animal wire. The electrifying currencies and extrasensory connections telemobility seems to immediately and immaterially execute assume the appearance of transferential powers transcending not only geographical space and historical time, but distinctions between the living and the dead, the animate and inanimate, human and animal, nature and capital. Indeed, one of the more devious effects of telemobility is its attribution of transferential powers to the technological media and to animals in a mutual, metaphoric production of each as a species of *living dead*. The mesmerizing powers of communication associated with what Galvani called "animal conductors" (and with what I call telemobiles) in turn promotes a discourse of clairvoyant capital, a fantasy of instantaneous technological exchange variously cathected to the animal electrometer, electrical current, the cinematic apparatus, mobile phones, and internet capabilities. Telemobility, in other words, displaces recognition of the materiality of transmission with the aesthetic of a spiritualist transference: technological media pose as *animal mediums*.

As such, telemobility fits within a long line of discourses in the west constructing animals and technology as substitute signs sharing the spectral currency of the undead. Lippit recapitulates the discourse of the undying animal as it recurs in philosophical, scientific, and psychoanalytic thought:

> Because animals are unable to achieve the finitude of death, they are also destined to remain 'live,' like electrical wires, along the transferential tracks. Unable to die, they move constantly from one body to another, one system to another. (192)

A canonical figure of the undead animal takes shape, in Lippit's survey, across heterogeneous texts which in different ways consign animals to a phantom existence outside of the possibility of language, time, and history – in short, outside of the anticipation or horizon of death. Excluded from this horizon, "the animal never dies: it merely vanishes" (Lippit 53). Like unconscious wishes, writes Lippit, animals "are indestructible, undying, they are recycled constantly throughout the world" (191). Lippit begins to buy into the currency of the figure of the undead animal which transcends its historical embodiment: "Undying, animals simply expire, transpire, shift their animus to other animal bodies" (187).

If both animals and electricity have been characterized as the living dead, so has capital, which Karl Marx accused of "necromancy" (*Capital* 80). Yet in likening commodity production to the dark, magical art of communicating with and raising the dead, Marx was attempting to defamiliarize rather than to mystify the spectral life of commodities, and to critique the seeming autonomy of machine and market life. The mimetic wonder provoked by what would, through the showmanship of Galvani's nephew, Giovanni Aldini, become electricity's spectacular promise to galvanize corpses back to life (and subsequently, in the Edison era, the popular idea that the telegraph and telephone could operate "both sides of the life-and-death switchboard" [Ronell, *Telephone Book* 7]), needs to be theorized in the context of the rising hegemony of market economies and the spectral powers described by Marx. For it is arguably only in their circulation as *capital* that animals and electricity can be articulated as spectral currencies. Yet it is the all-important context of capital which, crucially, is missing from Lippit's valorization of the electric animal.

The necromancer's transgression of the boundary between the living and the dead described, for Marx, the ultimate indifference of capital's value-form of exchange: money. Money, claimed Marx, is "the galvano-chemical power of society," an abstract currency which "makes impossibilities fraternize" (*Selected* 110). If inanimate things are galvanized to life through the bewitching power of money markets, animal life also comes into a new currency and "discovers fantastic new powers in the nineteenth century" (Foucault *Order* 277). As Foucault suggests, "the animal maintains its existence on the frontiers of life and death" in the emergent, complicit discourses of economy and biology in the nineteenth and twentieth centuries (*Order* 277). In the discursive frameworks of modern institutions and social practices, phenomena as diverse as animals and electricity are reinvented in the image of capital. That is, they are produced as exchange-values animated by a "law of motion" which makes them appear lively even as they assume a chilling indifference to their host bodies in their new sign-function, and to the material difference between living and dead nature (Marx, *Capital* 20).[2] Just as the specie value of coins and paper money become incidental to increasingly abstract representations of value, so the substance of the historical animal becomes incidental to the speculative, spectral currency of the animal sign.[3] As for electricity - the physical means of transmission diminish before its increasing luminescence as the spirit of invention: the Edison lightbulb becomes modernity's trope of electricity as a purely mental execution.

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[2] In his preface to the first German edition of *Capital* (Volume One), Marx writes: "…it is the ultimate aim of this work, to lay bare the economic law of motion of modern society" (20).

[3] In other words, animal life becomes an exchange-value. As Marx notes, "the body of capital" is of no matter under the rule of exchange value. "The body of capital [i.e. wool, rice, wheat] can change continually without the capital suffering the slightest alteration" (*Selected Writings* 257). His words recall Saussure's statement that the substance of the sign is irrelevant, and thus suggest that the logic of

An abstract logic of equivalence constructs capital, animals, and technology as spectral currencies, rewiring them as exchange-values transcending their substantial differences. I am particularly intent on critiquing how the technological media articulate with animal signs in cultures of capital to promote a communications fantasy of "painless transmission" (Debray 46). As I will suggest, the telemobility fantasy of immediate and painless transmission reaches a mimetic pitch (most persuasive, most pernicious) when it is articulated as "animal."

The Biopolitics of Becoming-animal

As I've noted elsewhere in my dissertation, Lippit identifies modern mimetic media (particularly photography and cinema) with animals' affective powers, powers he attributes to their "transferential" mode of communication (191). "Transference is the means by which nonverbal energy circulates within the world," writes Lippit (191). It consists in "the rapid movement of affect from one entity to another," a direct, intangible exchange of "pure energy" between bodies transcending, it would appear, historical, political, and material mediators (186, 196). Literary metaphor, photography, and cinema, contends Lippit, constitute "a structure and a site of communication that avoid conventional language," a structure and a site that are therefore, he proposes, animal (190).

By virtue of their claim to conduct a purely transferential exchange of information and affect, telemobiles - from frog legs hung on iron hooks to mobile phones – can be appended to Lippit's list of animal media. In telemobility discourse,

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linguistic value formulated by Saussure is dangerously sympathetic with the logic of exchange-value instituted under capitalism.

even long-distance "talking" assumes a telephonic immediacy approaching the zone of pre-discursive, "nonverbal energy" which Lippit identifies as animal. When telecommunications culture in the west (beginning, I suggest, with Galvani) articulates with the idea of animals' "semiotic capacity," that is, with "a 'communicability or transitivity' that is affective rather than discursive," it will thus appear to conduct an immediacy of exchange transcending material histories and contingencies (Lippit 30, 49).

In proposing that modern technological media possess an animal "structure," Lippit proposes a profound identification of animal life and communications media which resonates dangerously with the fantasy of becoming-animal excited by telemobility. Lippit not only distills animal life to an indestructible spirit which survives the death of the physiological animal to reenter different "media," he further implies that because modern technological media are in essence animal, they have a spectral existence beyond the time and space of material history and politics. What Lippit fatally overlooks, however, is that in the context of the biopolitical, power does not work only through the logocentrism of "conventional language" (has it ever?), nor does animal affect constitute a "structure and site" beyond the reach of power. On the contrary, animal signs are key discursive structures through which discourses of capital pump quanta affect into social life. It is in an eager affiliation with the body language and unpower of animals that biopolitical capital seeks, as I've suggested elsewhere, to become as immanent and politically innocent as "life itself."

With the rise of the technological media in the first half of the twentieth century (telephony, photography, cinema, radio), a traffic in "magical" affect emerges as an increasingly effective means of reproducing the hegemony of capital.[4] In his 1965 essay "Advertising: the Magic System," Raymond Williams discerned that rather than a superficial flourish appended to capitalism's "primary" modes of production, the communicative, affective functions of the advertising media were already a "necessary part of the economy" (421).[5] Far from marking the site and structure of an *other* economy suspended outside of the reach of power, as Lippit suggests, animal affect calls to be interrogated as increasingly immanent to the discursive fields of capitalism. The semblance of spontaneous life accruing to capitalist commodities and cultures can no longer only be understood to be a fetishistic product, as Marx held, of capitalist relations of production and labour; the animism of things must also be tracked as a discursive effect deliberately manufactured, with increasing intensity, by the mimetic machinery of capitalism, i.e. marketing, branding, advertising. Why, in the face of the growing power of mass mimetic media to incite and organize affect in service to cultures of capital, does Lippit valorize affect as an "essentially antidiscursive" energy and give the technological media sanctuary by inscribing them under the sign of animal nature rather than political culture (49)?

Part of the answer lies in the general consensus, emerging out of the collection of texts reviewed by Lippit, that the animal transists in an economy of time and space that can never be consonant with the time-space of social power. Among the discourses which risk supporting Lippit's configuration of an animal economy beyond power, for instance, is one elaborated by Gilles Deleuze and Felix Guattari, who in *A Thousand Plateaus: Capitalism and Schizophrenia* put the idea of affect into poststructuralist circulation as a deterritorializing force of "becoming-animal." Deleuze and Guattari theorize affects as "pure intensities" which disorganize subjects by provoking "becomings" between them: becoming-woman, becoming-animal, becoming-molecular, etc. (43). Unlike emotion, affect "is not a personal feeling, nor is it a characteristic; it is the effectuation of a power of the pack that throws the self into upheaval and makes it reel" (240). Affect, for Deleuze and Guattari, travels contagiously (or as Lippit puts it, "transferentially") across heterogeneous series: wolf and rat packs, swarms of bees and mosquitoes, bands of werewolfs and vampires. States, families, and other "apparatus of capture," by contrast, seek to domesticate the disorganizing power of affect by trapping it within fixed structures and social relations (444).

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[4] Michael Hardt and Antonio Negri suggest that "affective" modes of production emerge as a hegemonic force in a biopolitical empire characterized, among other things, by "a transformation of the dominant productive processes themselves, with the result that the role of industrial factory labor has been reduced and priority given instead to communicative, cooperative, and affective labor" (*Empire* xiii)

[5] In the 1960s Williams had already discerned, too, that advertising "has passed the frontier of the selling of goods and services and has become involved with the teaching of social and personal values; it is also rapidly entering the world of politics. Advertising is also, in a sense, the official art of modern capitalist society…" ("Advertising: the Magic System" 421).

Far from understanding affect as an effect of discursive power, in other words, Deleuze and Guattari formulate it as a "micropolitical" and involuntary force which sends life reeling out of the orbit of the political. Affect is especially, exotically, configured as an "animal rhizome" - a brush of fur, a scent, spoor, or lure triggering the "nonvoluntary transmutation" of being into becoming, and opening a spontaneous "line of flight" out of ontological formations (47, 269, 277).[6] Already in Deleuze and Guattari, affect is aestheticized as an animal free-radical which, rather than being politically motivated or *produced*, springs from an irrepressible multiplicity of heterogeneous nature. The micropolitical force of affect described by Deleuze and Guattari – who in their writings are as fascinated with its feral carriers as they are contemptuous of the oedipalized pets and domesticated "house dogs" which guard against it (244) – paves the way for the decidedly "apolitical" fascination with animal affect later relayed by Lippit.

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[6] While Deleuze and Guattari theorize multiplicity by way of the animal pack and swarm, they also posit "a single abstract Animal" as the plane of immanence upon which becomings occur (*A Thousand Plateaus* 45). That is, the animal returns as an arch-structure outlining the field of immanence, an organizing figure, ironically, for Nature as a "plane of consistency" or "body without organs" (270).

Yet in the context of a biopolitical field of social power, as I've already suggested, there is a great deal at stake in the animalization of affect as a rogue portion of pure energy splintered off from an organism, and in the fascination with the "electric animal" as an organic metaphor for a species of affective exchange beyond the politics of exchange-value. For as will become clearer over the course of this chapter, telemobility discourse also favours an animal figure of natural exchange, diverting recognition of the political character of exchange and discouraging a material politics of telecommunications capital. To resist aesthetic articulations of spontaneous, affective, animal exchange, I propose examining affect's mimetic production and productivity within biopolitical cultures of capital, where "life itself," in its seeming, teeming spontaneity, is after all a focal means and object of power (Hardt and Negri xiii).

This isn't only to suggest that affects and becomings have been successfully captured and reduced "to relations of totemic or symbolic correspondence" under the hegemony of capitalism, since such a suggestion assumes, along with Deleuze and Guattari, that the primary aim of power is to "break" becomings (248). It is also to suggest that affect is discursively aroused or *produced* as capitalism transforms (albeit partially and unevenly) into a field of "democratic" and "immanent" biopower, a field in which power operates as a micropolitical force of deterritorialization as well as a territorializing force (Hardt and Negri 23). In other words, cultures of capital no longer – did they ever? - pursue hegemony solely by means of "breaking" the "unnatural participations" and "unholy alliances" across heterogeneous series which

Deleuze and Guattari cherish as transgressive, but also, and crucially, by inducing them (*Thousand* 241-2).

At the very least, micropolitical affect as a spontaneous "animal" surplus is increasingly impossible to distinguish from the pervasive means and effects of "biopolitical production" (Hardt and Negri xiii). On what grounds, after all, does one distinguish the subversive becomings described by Deleuze and Guattari from the pseudo- or simulated becomings spawned through the sorcery of market culture, from the crossings of nature and culture productive of hybrid vegetable and animal capital, or human-animal-machine cyborgs?[7] Rabbit holes and sudden beelines out of dominant culture are equally difficult to distinguish from the spectral "lines of flight" opened up by telecommunications capital, which promises instantaneous exchange across heterogeneous bodies, cultures, spaces, and states. To equate cultural and economic hegemony solely with powers of territorialization thus risks, as Hardt and Negri suggest, missing "the contemporary object of critique": capitalism as a biopolitical "empire" which also pursues hegemony through rhizomatic means (137). The ineffectiveness of which Hardt and Negri accuse postmodernist critique extends to the "radicle-system" of becomings theorized by Deleuze and Guattari, which may not inscribe the radical departure from hegemonic sociality that it appears to (5):

> …postmodernists are still waging battle against the shadows of old enemies: the Enlightenment, or really modern forms of sovereignty and its binary reductions of difference and multiplicity to a single alternative between Same and Other….In fact, Empire too is bent on doing away with those modern forms of sovereignty and on setting differences to play across boundaries.
> (Hardt and Negri 142)

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[7] Donna Haraway has announced the irreversibility of miscegenations of nature and culture within advanced cultures of capital (and theorized hybridity rather than purity as a site of hegemonic struggle) in her essay "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," where she writes: "By the late twentieth century in United States scientific culture, the boundary between human and animal is thoroughly breached" (*Simians, Cyborgs, and Women* 152).

Yet rather than wholeheartedly agreeing with Hardt and Negri that empire is "bent on doing away" with modern forms of sovereign power, I hold, instead, that biopolitical capitalism expands its repertoire while keeping modern techniques of power in reserve The mimetic power of cultures of capital arguably consists both in the power to reduce becomings to relations of imitation (since in relations of imitation, as Deleuze and Guattari suggest, an ontological and hierarchical difference between original and copy, nature and culture, is retained) *and* in the power to breed an affective intensity of mimetic identification which exceeds imitation. Telemobility is at once a territorializing apparatus which reifies communication (plugs it into a planetary circuit of exchange-value and the paying metre of long-distance minutes) as well as a de-territorializing force inciting a "free" traffic in affect across a heterogeneous globe.

The Sympathetic and Pathological Rendering of Electric Animals

Once becoming-animal is viewed as a potential means and effect of biopolitical capitalism, it becomes possible to pursue a material politics of telemobility discourse. By articulating a capitalist economy of long-distance communication to the sympathetic magic of "animal electricity," telemobility obscures the pathological conditions and effects of exchange. In calling the material double of the sympathetic discourse of telemobility "pathological," I'm not suggesting a psychological prognosis of the sort offered in the 2004 film *The Corporation* (in which corporate capital features as a pathological "individual" in ways which risk working against recognition of capital's complex political constitution).[8] Rather, the pathological indexes the *substance* of the sign of culture, the material economies of nature and labour indiscernibly supplementing and productively contradicting telemobility's aesthetic effects. As Cary Wolfe notes, the identification of a domain of "mere" substances with the pathological is in fact one of the legacies of a Kantian project of enlightenment:

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[8] The film, made by Mark Achbar and Jennifer Abbott, traces how corporations were juridically individualized in 1886, when the US Supreme Court accorded corporations the same rights it accorded individuals. The film suggests that while corporations juridically qualify as persons, they are lacking the moral conscience which alone could humanize them. Current intellectual commitments to tracing

> …the Enlightenment (as completed by Kant) consists in the desubstantialization of the subject, its 'purification' from its substantial origin in nature, the animal, the bodily, the contingent, in what Kant calls, in *The Critique of Practical Reason*, the 'pathological'. (*Animal Rites* 109)

Both the sympathetic sign and the pathological substance of telecommunication are visible in Galvani's laboratory, where animals are rendered under the logic of the specter ("animal spirits") *and* the logic of the specimen (frog legs). As I've been arguing throughout my dissertation, cultures of capital seek to manage such a double logic of animal rendering as a productive rather than antagonistic contradiction. Linking the three historical discourses of telemobility I introduce below, then, is the productive, if sometimes precarious, ratio of sympathetic to pathological power inscribed in their animal signs, a ratio which each differently manages toward increasing the magical capital - and deflecting the material politics - of telecommunication.

I have already pointed to the discourse of telemobility at work in Galvani's laboratory: the muscular spasms which Galvani incited in dead appendages was evidence, he thought, of an electrifying communication with invisible "animal spirits" (68). Motion is simultaneously induced as the involuntary muscular reflex that will become the mechanical mainstay of an industrial machine culture, and as the

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"corporate genealogies" - brought to my attention as well as pursued by Heather Zwicker – are better able, I feel, to excavate the complex historical, economic, social, and cultural articulations through which corporations strive for hegemony.

symptom of an occult line of telecommunication pointing past mechanistic modes of production and toward the mediumistic aesthetics of information capital.

Nearly a century after Galvani's theory of animal electricity was discredited as a mere pseudo-science, Thomas Edison fused the sign of the animal to the sign of techological communication in a public performance less invested in the sympathetic than in the pathological power of electric communication. Unlike Galvani, Edison used animal flesh not as a sympathetic conductor of animal spirits, but as a mere substance upon which he could demonstrate to fellow Americans the superiority of direct current over the competing claims of George Westinghouse's alternating current. In January of 1903, Edison helped choreograph the public electrocution of Topsy, a six-tonne Indian elephant on exhibit at Coney Island's Luna Park. Topsy was toppled with 6,600 volts of alternating current to propagandize the mortal dangers of the Westinghouse system. The electrocution of Topsy amplified the earlier execution of William Kemler in North America's first electric chair, instituted in New York in 1890 according to Edison's design and on his assurances that a bolt of alternating current equaled instant (i.e. painless) death.[9]

The show-down with Topsy not only promoted the idea that corporeal punishment had found its apogee in the electrical switch, it also came to constitute ten seconds of some of the earliest live footage captured by emergent moving picture cameras. Topsy's execution served simultaneously as a technological demonstration against alternating current, and as a promotion piece for the cinematic branch of Edison's technological empire. While Topsy was the animal with the most symbolic and physical stature to be sacrificed to technological advancement in the Edison era, numerous cats, dogs, calves and sheep (as well as at least one horse) were similarly "westinghoused" at Edison's West Orange laboratory in New Jersey.[10]

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[9] While Edison certainly oversaw its design, it was Harold Brown, working at Edison's Menlo Park laboratory, who worked out the details of the electric chair. Edison is notorious for taking credit for the inventions of his underlings, and for borrowing or buying the patents of competitors to then market under his name.

A century after Edison's electrical-cum-cinematic execution of Topsy, the sign of the electric animal is rearticulated in yet another demonstration of technological culture, this time on behalf of electronic and digital modes of transmission. At the turn of the twenty-first century, Canada's second-largest telecommunications corporation, Telus Mobility Inc., launched concerted advertising campaigns metaphorizing the powers of its mobile phones, high-speed internet capabilities, and telecommunications services as a series of chromatically radiant flora and fauna.[11] The mimetic species often featuring in Telus campaigns are as ultra-incandescent as coloured bulbs throbbing in a constellation of electrical sockets. Yet Galvani's trope of intrinsic "animal electricity" is rearticulated in the Telus campaign in demonstration of an auto-electronic, wireless world ostensibly lit up from within and cut loose from external media sockets or switches. The poles and wires of the electrical infrastructure which Edison strove to monopolize are drained of all material density in Telus's aesthetic of a wireless world, one in which mesmerizingly quick relays of electronic and digital code appear to have finally shed all extraneous supports.

I excavate Galvani and Edison's early discourses of telemobility in order to better confront the sympathetic power of Telus's animal advertisements with the pathological violence of telecommunication's material conditions and effects. For unlike the scenes supplied by Galvani and Edison, in which a pathological economy of animal sacrifice still lies in palpable proximity to a sympathetic discourse of technological communication, in the popular Telus archive the substance of the sign of tele-exchange is profoundly displaced. The live animals in Telus ads infuse the seemingly natural act of communication with a comic innocence which makes it almost impossible to imagine that telecommunication could be contingent upon material and political violence. Yet following the mediological premise of Régis Debray - "*No more than there is any innocent medium can there be painless transmission*" (46) - my critique of the Telus campaign will ask where the displaced substance of the sign of telemobility is to be located.[12] Where is the historical flesh, still visible in Galvani and Edison's operating theatres, that carries the terrestrial burden of clairvoyant exchange?

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[10] Edison's ostensible opposition to capital punishment reversed abruptly at the species line. Edison regularly invited the local press to his laboratory in West Orange, where he electrocuted pets purchased from neighbourhood children to disseminate news of the potential deadliness of alternating current and to boost his own system of direct current.

[11] In actuality, it was the Clearnet corporation which initially developed the brand "look" which Telus, when it purchased Clearnet in 2001, decided to keep and intensify.

One particularly evocative ad in the Telus Mobility campaign returns me to the grisly experiments of Galvani and his use of electrical impulse upon mutilated frog legs to induce a spectral dance of life. The ad consists of a photograph of a neon-green frog sitting down to table (with a starched, digitally-rendered napkin tied around its neck), anticipating a dinner plate. As with every Telus ad, the background is astringently, even obstetrically, white. The production and consumption of technological media is bloodless. "Why pay more for á la carte?" the ad asks, pitching a telecommunications package deal. "Order a value bundle" (see Figure 9).

If the frog in the ad is subject to the workings of a commodity fetishism which Marx describes as a "table-turning" séance in which use-values are "changed into something transcendent" (i.e. exchange-values), it is important to recall that the table turns both ways when it comes to the life of the animal (*Capital* 82). For the double entendre of the Telus ad cleverly implies that frog legs are the order of the day in a telecommunications marketplace in which animal signs feed upon their own carnalized parts. Exchange-values become-animal – or rather, "animal Thing[s]" that "get up on their hind legs to the labourer and confront him as 'capital'" (Derrida, *Specters* 152)[13] - by cannibalizing their own sensible supports. According to the double entendre of rendering, animals are produced as signifiers *and* as substances. In the case of the overdetermined frog, the complicity of telemobility's sympathetic and pathological economies is glimpsed in the quip with which Telus humours its clients: in the wireless world, one can order a virtual "value bundle" and eat it too.[14]

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[12] Debray critiques semiologists who privilege the code – the "*message made absolute*" - above the "mere means" of its transmission (72, 80). His critique addresses this semiotic fantasy especially as it is promoted in telecommunications culture.

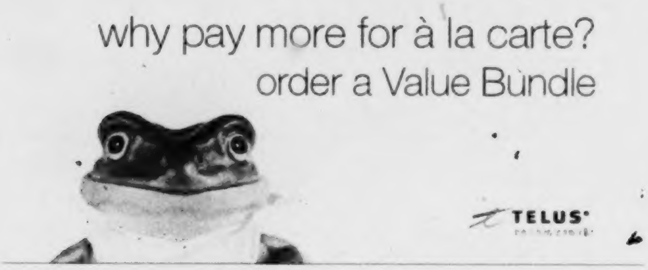

Figure 9. "Why Pay more for à la carte?" (Image reprinted with the permission of the Telus corporation, on the condition that it be clear that my interpretation of the ad does not reflect the views of Telus.)

Luigi Galvani

If at first glance Galvani's laboratory etchings and scientific notations seem consistent with the classical tradition of a Leonardo da Vinci, closer examination suggests that Galvani rather prefigures the electrical necromancy of a modern Dr. Frankenstein. What Mary Shelley would fictionalize in *Frankenstein* was in fact already attempted by Galvani: a necromancy with dead nature's carnal parts, and a desire to test electricity's power to reconstitute life, to render electricity the very sign of life. Etchings of Galvani's lab show bodies in pieces – frog and animal parts dangling from hooks, pinned to dissection plates, or suspended in jars of fluid, but also the detached human hand of science rhetorically executing and pointing (see Figure 10). Parts stand in for wholes in the metonymic discourse of science recorded by Galvani. Frog legs, which etchings of Galvani's lab show stretched and flattened on a series of zinc plates littering the surface of the operation table, are presented as two-dimensional figures. Tables and plates are, by turn, viewed through the mimetic plane of the medical etching itself in a reiteration of demonstrative surfaces. In fixing a piece of nature on a plate to render an impression of life, the aesthetic ideology of Galvani predicts that of the daguerrotype, the photograph, and the cinematic frame, each requiring briefer "contact" times with the life which seems to impress itself upon the representational plane. In Galvani's discourse, the dead, deductive parts of specimens are presented as mere incidentals, physical proxies standing in for the spectral animal invoked by his scientific séance: electricity. The piecemeal animals on Galvani's lab table are therefore not the ultimate object of the scientific gaze, which is invited to pierce through the flesh of "brute beasts" to the phantom force of animal electricity inspiring their muscular movements (Galvani 69).

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[13] The description of exchange-value as a becoming-animal is one which is more attributable to Derrida than to Marx, as I argue in my Introduction.

[14] In other words, "metaphors end where they begin – in the mouth," an idea which Lippit attributes to Nicolas Abraham and Maria Torok (*Electric Animal* 169).

In this section, I theorize Galvani's experiments in animal electricity as a mode of "monstration," to borrow a term from the film theory of André Gaudreault. Gaudreault distinguishes two narrative layers of film, the first of which he sees as technologically built-in or "innate," and which he calls monstration ("Film, Narrative, Narration" 71). This innate and "spontaneous" layer of narrativity accrues to the physical "articulation of photographs which constitutes the shot" (72). On this level, prior even to any narrative content, "every shot tells a story merely by means of iconic analogy" (71). Narrativity at the level of monstration, which as Gaudreault declares is "bound solely and indissolubly to *mimesis*," consists in technological articulation as an act of *showing*, rather than *telling* (72).[15] Rather than confine monstration to the early "cinema of attractions," I will approach the different discourses produced by Galvani, Edison, and Telus as technological "monstrations"; the term paradoxically gains both specificity and breadth when theorized as a mode of mimesis exploited at other cultural moments invested in the declamatory presentation of technology through the seemingly transparent mimesis of animal physiology. Monstration, in this view, becomes less tied to the structure of a particular technological apparatus (cinema) and can be analyzed as a discursive disposition through which different technological media mimetically demonstrate, or "show," themselves as animal signs.

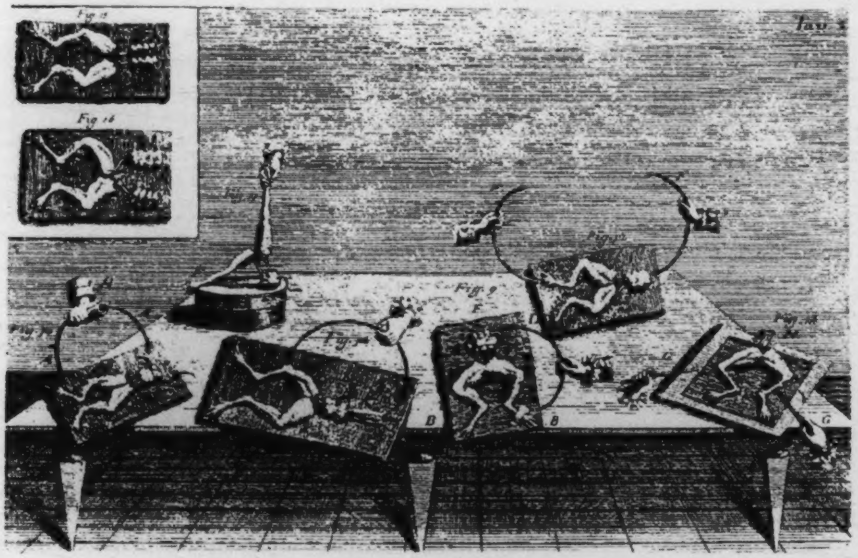

Figure 10. Etching of Galvani's laboratory.

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[15] In another essay, "Showing and Telling: Image and Word in Early Cinema," Gaudreault writes: "To tell a story one has to use one of two fundamental modes of narrative communication: narration, and what I call monstration. One must either narrate the different events which constitute the story (narration), as the lecturer does; or show them (monstration), as the glass slides attempt to do" (*Early Cinema: Space, Frame, Narrative* 276).

Through the mode of monstration, a technological media articulates with the supposedly apolitical body of an animal to naturalize communication as an inevitable, involuntary "animal utterance" (Lippit 30). The ostensible transparency of a monstration's technological articulation or "showing" presupposes that animal signs are themselves transparent, i.e. that animals cannot but "show" the biological law of their own bodies. In the mode of monstration, a technological media fetishistically articulates with the idea that animals communicate not symbolically, through signifying ("telling"), but through physical signing and uncontrollable discharges of affect ("showing"). The idea that animals are capable only of a physical "system of signalling" and a "prewired response" saturates not only the Cartesian worldview inherited by Galvani, but as Derrida argues, contemporary psychoanalytic, philosophical, and cognitive science discourses as well ("And Say" 130). As I will argue, monstrations induce the spontaneous signals and violent discharges of affect which they attribute to involuntary animals by producing the treacherous conditions under which animals cannot lie, and are forced to physically sign rather than signify.[16] Yet it is through the notion that animals transparently show the truth of their bodies that Galvani, Edison, and Telus attempt to naturalize technological communication, dissimulating the political, economic, and cultural machinery mediating it.

Physiology was beginning to gain legitimacy as a scientific discipline around the time of Galvani's early experiments in the 1780s. Just as the study of animal physiology conditions the emergence of photographic and cinematic culture a century later (through the time-motion studies of Edwearde Muybridge and Étienne-Jules Marey), so it supports the emergence of a discourse of telemobility which I track back as far as Galvani. In what follows, I examine how Galvani renders the tortured flesh of his "animal conductors" incidental by enciphering the animal reflex as a transcendent sign of electrical communication, or "life." I also track the talismanic piece of the electric animal which Galvani literally incorporated into the first electric cell or wet battery, and show that his discourse of telemobility is premised upon an animal "organ transplant" (Ronell 296). In other words, telemobility is materially as well as metaphorically contingent upon animal life. Containing the "germ of modern wireless telegraphy" and constituting an early expression of telecommunications discourse, the case of Galvani thus gives glimpse into the startling complicity between aesthetic and literal renderings of animal nature in telemobility culture (Montraville xi).

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[16] Lacan refuses that an animal can be a "subject of the signifier" on grounds that it cannot lie, that is, because of its "incapacity with respect to the 'signifier,' to lying and deceit, to pretended pretense…" (Derrida, "And Say the Animal Responded" 130, 132).

Galvani was by no means alone in the occult pursuit of electricity as an invisible elixir of life. However, he was the most insistent in isolating animal bodies as electricity's ultimate source and storage unit.[17] In scientific debate with Alessandro Volta and his opposing theory of contact electricity (from which would derive the voltaic pile), Galvani declared that Volta "attributes everything to metals, nothing to the animal; I, everything to the latter, nothing to the former…" (xxv). Unlike Volta, Galvani sought to locate the source of electricity in spiritual rather than material nature, more particularly in "the obscure nature of animal spirits, long sought in vain" (68). What disappears from Galvani's discourse is the historical force – the profoundly physical techniques – which conditioned the wondrous electrical events he was able to host over animal bodies. When Galvani touched exposed nerves with a metal scalpel, inducing "excited motions" in the monstrous half-bodies of his headless frogs, he framed the contractions as a sympathetic call-and-response of animal spirits, rather than as a confession incited from the flesh with the help of hooks and metal armatures (27). Despite what must have been Galvani's intimacy with the visceral substance of animal life – through the logistics of procuring and disposing of a seemingly endless stream of animal subjects, quelling the smell, texture, and resistance of bodies operated upon half-alive or freshly dead, excluding pain from the hermeneutics of the animal reflex and nausea from his own reactions to his test subjects' rapid "decay and rot" (Galvani 35) - the manhandling which mediated his metaphysics of animal electricity recedes from view. In Galvani's model of mediumistic communication, electricity thus appears to be sympathetically channeled through "animal conductors" rather than provoked through pathological force.

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[17] According to the dissertation of his nephew, Giovanni Aldini, Galvani held that a subtle "electric fluid" was more abundant in "brute beasts" than in "men" ("Dissertation on the Origin and Development of the Theory of Animal Electricity," *Commentary on the Effect of Electricity on Muscular Motion* 3).

In what is considered the core of his commentary – "The Effects of Atmospheric Electricity on Muscular Motion" – Galvani claims that fits of motion sprung in frog legs during an electrical storm are evidence of a sympathetic communication between electrical spirits resident in an invisible animal fluid, and corresponding agencies in nature. In an anterior realization of possibly *the* canonical trope of technological modernity - the electrical animation of the "spectre" assembled by Doctor Frankenstein out of parts collected from the "dissecting room and the slaughterhouse" (*Frankenstein* 90, 83)[18] - Galvani erected a lightning rod on his parapet "when a storm arose in the sky" (36). To the rod Galvani "attached by their nerves either prepared frogs, or prepared legs of warm animals" (36). He notes that "as often as the lightning broke out, at the same moment of time all of the muscles fell into violent and multiple contractions" (36). Galvani took the results as evidence that an "inherent animal electricity" was indeed the secret force of life (41).

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[18] As Julie Rak brought to my attention, Mary Shelley only suggests some galvano-chemical spark as the force of life in her novel *Frankenstein*, and never explicitly names it as electricity. It was in Frankenstein films of the 1930s that the Doctor was routinely shown conducting life to his creature through a lightning rod. Earlier Frankenstein movies, including the very first one made by Thomas Edison in 1910 (the first film to use a reverse shot sequence to depict the creature coming to life out of dis-assembled parts, a reverse-effect deserving of closer attention) depicts the creature emerging from vats and vaults rather electrical apparatuses.

The ability of electricity to provoke "excited motions" in convincing mimicry of autonomous life soon became known as "galvanism," a popularization of Galvani's science attributed to his nephew, Giovanni Aldini. Aldini is known for conducting electrical monstrations for the "admiration and pleasure" of more than select medical practitioners and audiences (Galvani 44). As Bernard Cohen notes, Aldini

> …shifted the sober discussion of the new science from the laboratory, the academy, and the pages of scientific journals to the arena of public entertainment, performing bizarre spectacles as a professional showman. That is, Aldini became a mountebank, demonstrating the effects of his uncle's discovery by electrically animating the head of a calf severed from its body, causing the eyes, tongue, and mouth to move or twitch. (Forward to Marcello Pera, *The Ambiguous Frog* xi)

In riveting performances orchestrated by Aldini, monstrations of animal electricity normally limited to the extortion of lifelike effects out of dead animals graduated to the extortion of similar effects out of human corpses. Galvani electrified spectators when he made a criminal "recently dead from a public hanging" sit bolt upright on the scientific stage (Cohen xiii). Through the performance of "animal electricity," the mutilated or dead body is dissociated from the life it can continue to "sign" through muscular motions; the body is merely the means of contacting spirits surviving beyond pathological substance. Though never fulfilling its hopes of reanimating the dead, the discourse of galvanism nevertheless played an important part in constructing a culture increasingly willing to locate the sign of "life" in mimetic motions of the technological media.

It is no surprise that electrical monstrations eventually crossed the speciesist divide in Aldini's entertainments; all along Galvani was intent upon medically applying his theory of animal electricity to human health. His discourse of animal electricity simultaneously allowed for absolute distinctions between animal and human (the only ideological stance capable of justifying experiments on animals that would be unthinkable on a European humanity) *and* the collapse of physiological differences between bodies as different as humans and amphibians (what is tested on frog legs can be therapeutically used on humans). This species ambiguity infects Galvani's lab drawings; the aesthetic tradition of cross-hatched etching carried over from renaissance humanist renderings of classical anatomies inevitably anthropomorphizes the vertical, dangling frog legs. The frog's classically-rendered thighs and calves are, uncomfortably, virtually indistinguishable from a human's, emerging as recognizably amphibian only at the feet (see Figure 11).

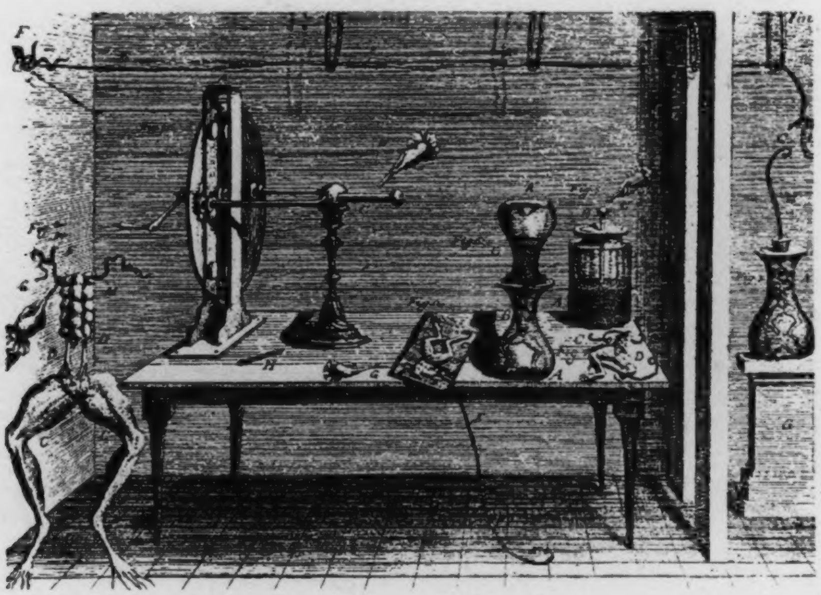

Figure 11. Galvani's ambiguous amphibian.

Thus Galvani soon began applying electrical stimulations rigorously tested on frogs upon patients with nervous – that is, electrical - stagnations. Electricity, claimed

Galvani, was "an aid for dislodging, dissolving and expelling from the nerves principles stagnant and impacted in them" (79). Significantly, Galvani saw electricity as a cure especially for patients suffering from stiffness of movement (rheumatism) and paralysis. It is tempting to read Galvani's therapeutic answer to physical stiffness and nervous stagnation - and his nephew's spectacular inducement of signs of life in the criminal corpse - as themselves symptomatic of a larger nervous condition: the rising cultural logic of capital and the rule of abstract currencies no longer contingent upon a pathological domain of material bodies and substances. The dead could be raised, as Aldini monstrated, or at least made to continue "signing" life. Pathological substance would be made subject to the spiritual impulses of electrical communication and market culture, rather than the other way around. The currency of "animal electricity" dovetails with a logic of capitalism intent on enlisting even the dead in a perpetuity of exchange by recycling substance through endless sessions of "life and death" governed by the market.

Although Alessandra Volta eventually debunked the scientific credibility of Galvani's theory of animal electricity, a metaphysics of electric communication only gained in symbolic currency. It grew with long-distance developments in telegraphy and telephony across the nineteenth century, and infused AT&T's invitation, in the 1930s, to "Reach out and touch somebody" (subsequently popularized as "keeping in touch" via the technological media). As Jeffrey Sconce notes, early in the twentieth century *Popular Science Monthly* declared that through emerging wireless communication, "the nerves of the whole world [were], so to speak, being bound together, so that a touch in one country [was] transmitted instantly to a far-distant one" (*Haunted Media* 61). This promise of affective telecommunication constitutes a semiotic of contagious "touch" shed of its pathological referents, produced as a spiritual quantity ephemerally exchanged rather than materially mediated. Yet the spiritual touch promised by telemobility discourses often hinge, as Galvani's lab shows, upon a violently contradictory economy of pathological contact.

Up to this point, I have argued that Galvani's construction of communication as a spirit session hinges upon the sympathetic connection he "monstrates" between animals and electricity – upon the "imitative magic" of their metaphorical correspondence (Taussig, *Mimesis* 220). Yet the metaphorical construction of a sympathetic wavelength between the two is subtended by "contact magic," a close-range manipulation of pathological substance (hair, spittle, fingernails, clothing) to establish a physical link. For Galvani, who believed that electricity was an imperceptible nervous fluid most concentrated in animal tissue, internal fluids of a frog became the chosen substance of electrical communication. That is, frog fluid is included as a fetishistic, metonymic link in Galvani's chain of ideas. It is arguable that the flesh which Galvani dangles as bait to call forth "animal spirits" is inescapably fetishistic, *especially* when the hand of science seems to indifferently point past it. For even in piercing through his specimens to the imperceptible "nervous powers" behind them, Galvani fixates upon animals as electricity's most charged depositories (58). His fixation narrows in on the body of the frog, and again, in on the specific substance which Galvani believes to be most closely contiguous with electrical spirits: its bodily fluids. In his design of the battery as a technology for conducting and storing electricity, Galvani places frog fluids between two metals according to his belief that they are the source of its electrical charge.

The history of modern communications technologies is packed with such talismanic incorporations of animal parts. Jonathan Crary recalls Descartes' instructions to use a "bovine eye" for the lens when constructing a camera obscura

(*Techniques* 48).[19] Martin Jay notes a similar substitution of cow for human eyeball in the "famous scene of the slit eyeball in the Surrealist masterpiece *Un chien andalou* by Dali and Bunuel in 1928" ("The Disenchantment…" 176). Avita Ronell recalls the telephone's debt to animal transplants, from the "tympanum of pig bladder" in early Chinese telephones, to the fur of the stuffed family cat used by Thomas Watson (partner of Alexander Graham Bell) "as an exciter for a frictional electric machine" (296, 239). The history of the battery brings into sight more of a transfusion than a transplant, but one which all the same marks the site of a physiological transfer of powers from animal to technological media.

Volta later proved that it was the presence of heterogeneous metals which, with the help of a moist material, conducted electricity – not animal spirits. Volta replaced the talismanic fluids of Galvani's battery with other (less fetishistic) wet materials, initiating a chain of material displacements which makes it harder to discern how animal signs and substances get encrypted in technology's very "stuff of inscription," to use the words of Lisa Gitelman (10).[20] As I track an aesthetic of telemobility across the twentieth and twenty-first centuries, the pathological will not always lie in as palpable proximity to the sympathetic as it does in Galvani's discourse.

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[19] Writes Crary, "Descartes advises his reader to conduct a demonstration involving 'taking the dead eye of a newly dead person (or, failing that, the eye of an ox or some other large animal)' and using the extracted eye as the lens in the pinhole of a camera obscura. Thus for Descartes the images observed within the camera obscura are formed by means of a disembodied cyclopean eye, detached from the observer, possibly not even a human eye" (*Techniques of the Observer* 47).

[20] Gitelman also insists on signs' "double character, both material and semiotic" (*Scripts, Grooves, and Writing Machines: Representing Technology in the Edison Era* 10). "Modern technology has made some features of this doubleness seem particularly arcane," she writes. "For example, the original electric meters of the 1880s were really halves of little batteries; to 'read the meter' a technician had to remove a zinc electrode and weigh it in order to determine the amount of ion deposit….These ion deposits, like the ion deposits on photographic plates or strips of celluloid, are the stuff of inscription" (10).

Thomas Edison

Galvani's wet battery was in both a literal and figurative sense an animal "crypt," physically storing the talismanic fluids of what Galvani believed to be the electric animal as well as encoding a discourse on animal spirits (Lippit 187). Thomas Alva Edison was similarly fascinated with the possibility of electrical storage, working for years on the design for an alkaline battery. However, it is not the battery which encrypts Edison's discourse on the electric animal, but another recording-storage apparatus of which he is the fathering figure: the motion picture.[21]

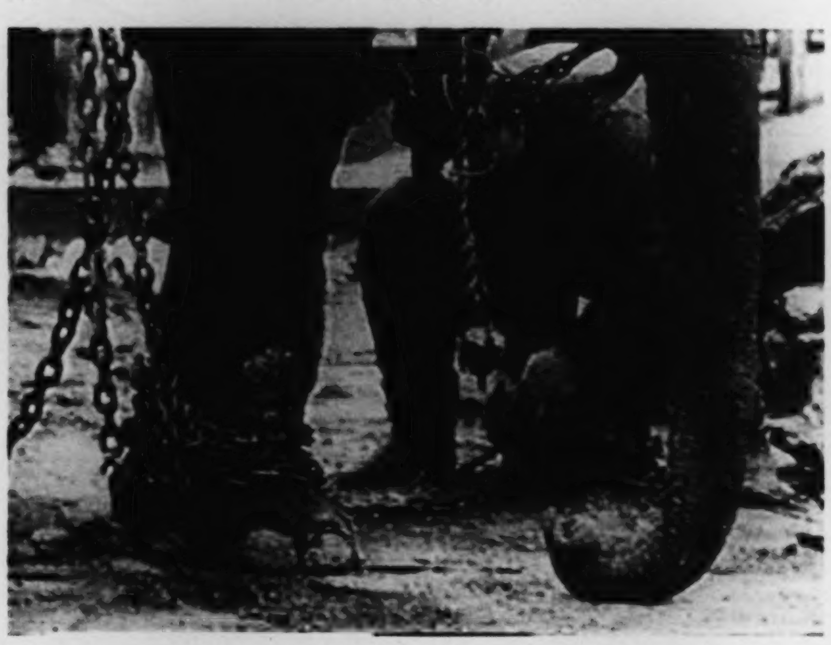

Figure 12. Topsy the elephant being readied for electrocution.

As I've already mentioned, among the first early subjects to be immured on celluloid by the Edison Manufacturing Company was a sober "actuality" – "Electrocuting an Elephant" (1903). The black-and-white, single-shot, silent moving picture shows smoke rising up Topsy's elephantine legs as she is administered a bolt of alternating current through electrodes attached to her feet (see Figure 12). Smoke and her slowly teetering body are the only signs of the technological communication of death captured by Edison's Vitagraph movie camera – the smell of burning flesh and the sounds of the Coney Island crowd that gathered on a Sunday to watch her electrocution are outside of its scope. A New York newspaper reported that Topsy died without "a trumpet or a groan" (*The Commercial Reporter*, January 5, 1903), bereft of the animal cry which might have negatively scored her physical trial just as she was being suspended in a silent reproduction of her death.[22]

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[21] William Kennedy Laurie Dickson, working for Edison, is now widely recognized as having invented the first motion picture camera. In 1902, a court ruled that Edison did not invent the movie camera (Edison vs. American Mutoscope). However, shortly afterwards Edison purchased the patent off of the American Mutoscope and Biograph Company (for whom Dickson now worked) and marketed the movie camera as his own invention.

In the soundlessness of "Electrocuting an Elephant," the narrative arc consists solely in the prostration of an animal (such that the film's narrative content manifests, as it were, a pathological logic latent in the technological mode of "monstration"). The seemingly transparent and inevitable fate befalling the animal had in fact been carefully calculated by Edison to "show" several things: the deadliness of the Westinghouse current coursing through Topsy, the ability of Edison's Vitagraph moving picture camera to receive the impress of a raw event (appearing to passively record rather than actively render), and finally, the stunning immediacy with which both electrical and cinematic technologies appeared to execute their effects. In his study of the technological relays linking bodies and machines around this time in American culture, Mark Seltzer draws attention to the mixed sympathetic and pathological promise of electrical current, or as he puts it, "the violent immediacy promised by communication and control technologies operated by the electric signal or button" (11):

> The electric switch, ready to hand, promises to reconnect the

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[22] Giorgio Agamben theorizes the idea that an "animal voice" or cry is the negative trace or supplement of language (*Language and Death: The Place of Negativity* 45).

> interrupted links between conception and execution, agency and expression. Such a violent immediacy posits an identity between signal and act and an identity between communication and execution – 'execution' in its several senses. (Seltzer 11)

The ideological repercussions of the "violent immediacy" of Edison's film spread far beyond his local intentions. The short film sears the dying animal into the historical archive of early electrical and cinematic culture. It suspends animal life in a media state in which the animal can always be seen falling halfway between life and death. It renders Topsy a spectral, undying currency which can be perpetually circulated through the mass media, as well as a disposable specimen. In short, by managing its sympathetic and pathological messages in generative tension, Edison's monstration is productive of a double logic of rendering.

Lippit argues that:

> Modernity sustains…the disappearance of animals as a constant state. That is…animals never *entirely* vanish. Rather, they exist in a state of *perpetual vanishing*. Animals enter a new economy of being during the modern period, one that is no longer sacrificial in the traditional sense of the term but, considering modern technological media generally and the cinema more specifically, *spectral*. (1)

In "Electrocuting an Elephant," cinema can be seen, however, to be linked to a pathological and political communication of death to the animal; by plotting Topsy's execution, Edison inadvertently reveals that cinema's spectral economy is more than passively complicit in animal sacrifice. The animal plot of cinema thickens when it is recalled that the celluloid physically supporting "Electrocuting an Elephant" was first developed, as I note in Chapter one, by the Celluloid Manufacturing Company in the 1870s as a substitute for ivory (and only subsequently developed by George Eastman into the stuff of flexible film). The film stock supporting "Electrocuting an Elephant" bears (again, to recall arguments in my first Chapter) a sensible trace of capital's pathological relation to animal life, since onto its celluloid stock Eastman machines coated a see-through photographic gelatin emulsion derived from the remains of industrial slaughter. It is onto the translucent animal matter of film stock that the electrocuted image of Topsy is seared, trebling the film's convoluted discourse on animal life and supplying a charged coincidence of cinema's contradictory aesthetic and material economies of rendering. The "alliance between animals and cinema" in modern North American culture begins to emerge as a violent rather than redemptive alliance, in opposition to Lippit's claims (25).

Edison had associated death by electrocution with the cinematic event prior to the ten seconds of silent footage comprising "Electrocuting an Elephant." In "Execution of Czolgosz" (1901), Edwin S. Porter's camera work had probed the walls of a penitentiary and pulled viewers toward the terrible vanishing point of the freshly instituted electric chair. Yet "Execution of Czolgosz" was a special-effects restaging of the electrocution of President William McKinley's assassin rather than an "actuality"; in that it did not stake an aesthetic discourse of technological communication upon the ostensibly transparent body language of an animal, it wasn't a monstration in the sense in which I have been adapting Gaudreault's term. Nevertheless, the attraction of cinematic and electrical power to the crux of discipline and punish helps me to implicate them both in the field of biopower theorized by Foucault.

While modern punishment remains corporeal, writes Foucault, "in its most severe forms [it] no longer addresses itself to the body" but to the soul (*Discipline* 16). Since the effects of electrocution were designed to be contained within the private interior of the body, ideally leaving no trace of violence, it promised to take the biopolitical accomplishments of the guillotine and the noose to a heightened level of subtlety. Lethal injection was appealing for the same reason, and was already under consideration in the Edison era. In accordance with the productive impetus of biopower, moreover, the electrocution of Topsy would also generate a series of "positive effects" for the agencies which executed it (*Discipline* 23). Her death would excite interest in electrical and cinematic technologies, and her undying image would become the property of the media, incorporated into the cinematic archive. If Lippit is right in suggesting that "[t]echnology becomes a subject when it gains an unconscious," and that an "artificial unconscious is established by the incorporation of vanishing animals," then cinema would also acquire an affective dimension of subjectivity through Edison's deadly exchange with Topsy (190).

Transfiguring Topsy from a historical creature into a spectral currency would nevertheless prove a difficult – and precarious – modern project. By killing three abusive trainers, Topsy had asserted her historical subjectivity and earned herself something of a reputation; she was a subordinated but not wholly subordinate body embroiled in the mimetic politics of nature, race, and labour in the "electric Eden" where she lived.[23] The 250,000 incandescent Edison lightbulbs which lit up Coney Island's Luna Park when it opened in the early 1880s attracted visitors to a wonderland in which the powers of animal life, capital, and electricity circulated as metaphorical exchange-values, generating the "mesmerizing" fantasy of animal electricity (spiritualistic and libidinal) in which Luna Park trafficked. The unprecedented shows of electric light, the symbolic and somatic thrills of riding on the back of an Indian elephant such as Topsy, or spending the night in the hind leg of the Elephant Hotel, of riding a roller coaster or being strapped into "the electric chair" for a mock fatal shock, constituted some of the Park's dizzying mimetics.[24]

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[23] On the back of a Public Broadcasting Service (PBS) American Experience video on Luna Park, Steeplechase, and Dreamland (the three giant amusment parks operating on Coney Island in the 1880s), Coney Island is described as having been a "mesmerizing seaside amusement empire…". *Coney Island: The Ups and Downs of America's First Amusement Park* (1991).

The owners of Luna Park, Frederick Thompson and Skip Dundy, used Topsy and other elephants in their private herd to haul and hoist materials in the park's monumental construction. Yet they weren't content to capitalize upon the physical strength of the captive animal; elephants worked double duty for amusement capital both as labour power and as fantasmatic support. Topsy was therefore also presented as an animal spectacle on whom paying visitors could take a ride, sitting in a tassled pagoda astride her back that was a piece of colonial aesthetica capping the fantasy of foreignness the park cultivated. In her double currency as labour and as spectacle, Topsy shared the troubling contradictions and historical predicament of the black picaninny-minstrel whose name she had been given – a name which racially typecast African-American slave labourers as natural entertainers.[25] Though an elephant from India, Topsy represented an undifferentiated category of racial otherness that allowed Thompson and Dundy to just as easily present her as an African specimen in order to capitalize off of popular racist stereotypes in American culture. Topsy, the ill-tempered elephant of Luna Park, was expected to substantiate a fantasy of animal life that could not be configured without a supplementary fantasy of race, racism and speciesism inclining against each other's fantasmatic supports as interdependent discriminatory constructs. Thompson and Dundy's original plan to lynch their disobedient charge – though rejected due to opposition from the ASPCA - would have consummated the interactivating imaginaries of species and race preyed upon by amusement capital. Topsy's electrocution nevertheless still managed to make a spectacle out of both an impudent animal and a racial chimera. While cinematic and electrical ideologies divided semiotic shares in the spectral event, Frederick Thompson apportioned himself a literal piece of the animal specimen by preserving two of her feet and a part of her hide for an office chair (Stanton, Coney Island History website: <http://naid.sppsr.ucla.edu/coneyisland/articles/earlyhistory2.htm> December 2004).

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[24] The Elephant Hotel was a small hotel built in the shape of an elephant by James V. Lafferty in 1885 (it burnt down in 1896 in one of Coney Island's famous fires). According to Jeffrey Stanton's Coney Island History website, "a cigar store operated out of one front leg, and a diorama was in the other. A spiral staircase in the hind leg led visitors upstairs where a shop and several guest rooms were located. The elephant's head, facing the ocean, offered good vistas of the sea through slits where the eyes were located" (<http://naid.sppsr.ucla.edu/coneyisland/articles/earlyhistory2.htm> December 2004).

[25] Edison must have been cognizant that the name of the elephant he filmed being electrocuted in 1903 was the same as that of the black slave girl in Harriet Beecher Stowe's *Uncle Tom's Cabin*, for he produced a full-length (14 minute) silent film based on the novel in the same year. Topsy was a stereotypical name for the infantilized, animalized black character that was a staple of minstrelsy well into the 1930s.

As animals like Topsy were being transfigured, through the fantastic convergences of money and electrical power reified by Luna Park, into a new affective currency, they were also being subjected to new ethological demands, to training regimes designed to make them into the obedient body-content of circuses, public zoos, amusement parks, photographic and filmic events. The elephant with possibly the most symbolic currency in this period was Jumbo, purchased by P.T. Barnum from the London Zoo for $10,000 in 1882. (Jumbo would be accidentally hit by the Northern Trunk freight train in Canada in 1885 at another fatal intersection of technological mobility and animal life). Elephants like Jumbo and Topsy had to be materially managed in ways that would allow them not only to labour for capital, but to fill new symbolic functions demanded by the cultural exhibits and amusements of the Edison era. However, Topsy was what a journalist in New York's *The Commercial Report* called a "Bad Elephant" in a story covering her execution ("Bad Elephant Killed: Topsy Meets Quick and Painless Death at Coney Island" Monday, January 5, 1903). By killing two handlers, Topsy showed her resistance to the pressures and often brutal prompts physically adapting her to serve the symbolic economy of the Forepaugh Circus, whose owners first brought her to North America as captive animal capital. After being sold to Thompson and Dundy, Topsy continued to express agency and antagonism by trampling a third handler, who peppered her daily training with vicious acts such as feeding her a lit cigarette. His act suggests that Topsy's handlers may themselves have been "bad," that is, not yet in line with emerging ethological sciences of animal communication, principles of sympathetic material management, and the fervour for interspecies intimacy that would make trainers in wildlife theme parks such as San Diego's *Sea World* (or field scientists such as Dian Fossey and Jane Goodall) popular heroes toward the latter half of the twentieth century. Only the handler responsible for Topsy directly before her electrocution modeled the properly modern love of the animal trainer by refusing to lead her to the platform where she would be executed.

One hundred years after Topsy responded with agency to her cruel taunts, captured wildlife seems to have far fewer reasons for repaying the care of human trainers with seemingly unwarranted violence. In 2003, when Roy Horn of the renowned Siegfried and Roy magic show was attacked by one of his white Bengal tigers during a Las Vegas performance, Siegfried assured the media that the two had only gotten their telepathic signals mixed.[26] More than ever, attacks by well-trained animals are mystified as accident or ill-temper rather than interrogated as symptomatic excesses of the *sympathetic violence* of a biopolitical organization of animal life just beginning to appear during Topsy's lifetime.

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[26] When the sympathetic magic of animal handling was broken by Montecore (the white tiger who acted out in 2003), Siegfried tried to heal the puncture in the fantasy by assuring the media that the tiger was confused (at first, because Roy seemed to have tripped on stage, but in a later version of the story because it sensed that Roy was having a minor stroke). On *The Today Show*, Siegfried told a U.S. television audience that "there was no injury from Montecore, it was just a little punch hole….Montecore carried him 30 feet offstage to his safety. Now that's a story" (<http://www.reviewjournal.com/home/2003/Dec-02-Tue-2003/news/22706426.html> April 7, 2004). Tiger experts, however, maintain that it was an attempted mauling. Siegfried and Roy have heroically helped to "conserve" Royal White Tigers for capitalist postmodernity in a multi-million dollar simulated habitat inside the Mirage Hotel and Resort where they performed magic shows for 13 years.

Any exercise of mimetic power working to control the terms of identification and differentiation with its ostensible object risks generating, however, forms of "mimetic excess" resisting containment (Taussig, *Mimesis* 252). The powers which conspired to execute Topsy – backed by electrical, cinematic, and amusement park capital – betrayed confusion in the face of excesses and contradictions sparked by the modernization of the sign and treatment of animal life. The fact that Topsy was criminalized and sentenced to public execution was in one sense cultural acknowledgment that she was a historical subject - "bad," but historical. Topsy was among the last openly executed animals in North American modernity.[27] Though not prosecuted in a court of law like myriad animals in pre-modern Europe, her public execution nevertheless mimicked a ritualized procedure of legal punishment.[28] In this sense, the execution of Topsy marked an exception – a confusion - in the smooth "institution of speciesism" which, by the turn of the century, had routinized the "non-criminal putting to death" of livestock and unwanted animals (Wolfe, "*Faux* Post-humanism" 117; Derrida, "Eating Well" 112). Even if designed as a publicity stunt, in announcing the public execution of an animal Thompson and Dundy reawakened the pre-modern idea that animals were socially answerable subjects living within the same judiciary and symbolic precincts as humans. The potential confusion that Topsy's execution introduced into a modernizing relation to animal life stemmed not only from the murderous intent attributed to her actions (contradicting the idea that animals are no more than a bundle of pre-programmed instincts and involuntary reflexes[29]), but also from the related suggestion that Topsy could in fact suffer a death sentence. In animals' philosophical construction as undying energies "recycled constantly throughout the world" (Lippit 191), the anticipation and finality of death were, after all, what they were said to be incapable of suffering. The electrical rendering of Topsy thus may have had a dual effect: humanizing the animal by "including" it in capital punishment's framework of symbolic sense, while conversely bestializing the human victims of capital punishment by associating them with the disposable specimen.

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[27] Topsy wasn't the last elephant in North America, however, to be publicly executed for killing a human. In 1916, an elephant owned by the Sparks Brothers Circus was dubbed "Murderous Mary" for killing a handler, and hanged from a derrick car. Her lynching suggests, again, the intertwined categories of race and species.

[28] For a study of animal trials from the middle ages up to the modern era see E.P. Evans' *The Criminal Prosecution and Capital Punishment of Animals; The Lost History of Europe's Animal Trials*, first published in book form in Great Britain in 1906.

Topsy was thus a test subject, a scapegoat, saddled with the unresolve of a culture debating, among other things, a historic shift in the State's technologies of death. If animal pain was barely legible in Galvani's time (as the discourses which were able to bring it into recognition were only just taking shape), it had certainly become readable by the time Edison began plotting Topsy's death. Unlike earlier trials which accepted and expected the torture of animal bodies, Topsy's execution had to be "humane." In the 1780s, although Luigi Galvani was still preparing animal bodies according to the understanding that they were unfeeling automata, the first glimmers of an animal liberation movement were stirring in Europe.[30] Jeremy Bentham not only designed a Panopticon which signified, at least for Foucault, the advent of modern institutions and techniques of biopower, he also inspired a movement against animal cruelty that would initiate reforms in the corporeal treatment of animals, and hence a biopolitical dispersal of the violence of killing. As Bentham declared in *An Introduction to the Principles of Morals and Legislation* (1789): "The question is not, Can they reason? Nor Can they talk? But Can they suffer?" (7).

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[29] Deaths caused by animals, as Lippit notes, could not properly be called crimes in the modern perception because that perception held them to be ruled by reflex and incapable of premeditation: "The animal cannot be held accountable for its crimes because, like Oedipus, it is unaware of its actions" (*Electric Animal: Toward A Rhetoric of Wildlife* 50).

[30] Mark Essig dates the creation of Europe's first humane societies prior to Bentham, and argues that they originated less out of a concern for animal suffering than from an interest in galvanism: "Physicians in the 1740s had discovered that some people who appeared to be dead could be revived by forcing air into their lungs. Suddenly, the boundary between death and life became blurred….In the 1760s, these doubts inspired the creation of the first 'humane societies,' organizations dedicated not to the welfare of animals but to reviving the apparently dead" (*Edison and the Electric Chair. A Story of Light and Death* 43).

His words shifted "the question of the animal" to an affective register which threw corporeal maltreatments of animal bodies into visible relief and arguably pressured power into new biopolitical shapes (shifting the object of disciplinary power from animal bodies to animal souls, and technologies of power from the pathological to the sympathetic). As Derrida puts it, Bentham opened "the immense question of pathos and the pathological, precisely, that is, of suffering, pity, and compassion" ("The Animal" 395).[31] His outspoken recognition of animal suffering would inspire Britain's SPCA, founded in 1822, to push for parliamentary acts punishing cruelty to animals, as well as for slaughterhouse reforms. It would also inspire the founding of New York's ASPCA in 1866 by Henry Bergh. In 1892, the American Humane Association would pass laws "prohibiting repetition of experiments on animals for the purpose of teaching or demonstrating well known accepted facts," a motion that was, however, not opposed to an exemplary delivery of death-without-pain such as Edison planned for Topsy (<http://www.columbia.edu/~orahn/animal/timeline.htm> April 9, 2003). Rather than contesting capitalism's institutions of speciesism, Bentham's political sympathies only demanded, in the end, that they be "manage[d]… in a more humane way"

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[31] Despite Derrida's wonderful theorization of the passivity or "nonpower" of animals ("being able to suffer is no longer a power, it is a possibility without power") he doesn't consider how an affective economy of pathos, of sympathy, may constitute an exercise of biopower within cultures of capital, one which is at productive odds with a supplementary economy of pathological violence ("The Animal that Therefore I Am" 396).

(Laclau and Mouffe xvii).[32] The indices of animal suffering raised by Bentham are thus strategically folded back into the renewed productivity and reformed practices of biopolitical capitalism.

Electricity (and soon cinema, through documentary footage of abattoirs and appalling conditions of animal life) had in fact become a key technology in the biopolitical reform and modernization of the pain of death. The first aim of the Humane Slaughter Association of Britain (founded in 1928) was to replace the pole-axe with a mechanically operated humane stunner. In Europe as well as in the U.S. it subsequently became mandatory to use stunners on all cattle and calves, and an "electrolethaler" on pigs and smaller animals – initiating a series of disjunctions analyzed by Vialles in *Animal to Edible*. Just as the pressing of the electric switch by state officials was designed to remove pain and recrimination from the administration of capital punishment, Vialles argues that the modernization of abattoirs similarly displaced the violence of industrialized slaughter (32). In other words, the non-criminal putting to death of humans and animals found a new institutional grounding in the deliverance from pain promised by electric shock:

> Who kills the animal? The person who stuns it, or the person who bleeds it? Not only is such a doubt formally possible; it exists in reality….what we have here is not a sequence of operations but a disjunction – and even a *double disjunction*: between bleeding and death on the one hand; between death and suffering on the other. Indeed, the first man does not really kill, he anaesthetizes. The second (or third) does not really kill either; he bleeds an animal that is already inert and, in the terms that are in constant use, 'as if dead'. The result of dissociating death from suffering in this way is as follows: since anaesthesia is not really fatal and since painless (or supposedly painless) bleeding is not really killing, we are left without any 'real' killing at all…. (Vialles 45)

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[32] It is in the context of contemporary neo-liberal discourse that Laclau and Mouffe argue that the point is not to "manage [capitalism] in a more humane way," but to contest its seemingly inevitable hegemony (*Hegemony and Socialist Strategy* xvii).

Electricity was not only masterful in its anaesthetizing effects, it was equally productive of an ensemble of aesthetic effects. Benjamin Franklin – among the first to recommend electrocution as a method of humane slaughter – discovered not only that the discharge from a battery of two Leyden jars was "sufficient to kill common Hens outright," but that "electrical slaughter" improved the taste of meat: "I conceit that the Birds kill'd in this Manner eat uncommonly tender" (qtd. in Essig 10). In the 1950s, animal carcasses were electrically stimulated in accordance with Benjamin's idea that electricity had a tenderizing effect on meat. While by the 1980s this idea had fallen out of vogue, meat was still being electrified to achieve "improved lean color, firmness, texture, and marbling score" according to the shifting aesthetics of "dressed" meat (*The Meat We Eat* 94).

The biopolitical turn in western culture arguably insinuated the management of affect into every site of production – industrial, electrical, cinematic. Yet while affect was coming into production, so to speak, pain fell subject to the strictest of controls, being materially and aesthetically excised from the cultural consciousness of capitalism. The recognition of pain involves, after all, the admission of a material world composed of dense, resistant flesh and death, a domain met with antipathy by telemobility and other discourses invested in a fantasy of painless and immediate exchange. Neither can a capitalist economy formally admit pain insofar as it recognizes only those material "costs" which can be monetarily calculated. Animal and human suffering, like ecological damage, is a material cost which capitalist culture disavows in order to avert the recognition that it makes a killing not only off of human labour, but off of the *travails* of non-human subjects. While the organization and exploitation of human labour-time forms the backbone of Marxian critiques of capital, post-Marxist critique opens up the possibility of theorizing the organization, institution, and discourse of speciesism pivotal to the reproduction of capital.

While the ASPCA and other humane societies had denounced hanging, they were not yet convinced that electrocution was the painless solution Edison claimed it to be. In the opinion of some of the public witnesses to William Kemler's electrocution in 1890, it was a traumatically inexact technology, "far worse than hanging" as a headline in *The New York Times* put it (August 6, 1890). Determining how much voltage was needed to kill the average human proved a messy science; Kemler had to be administered an impromptu second bolt when it became apparent that the first had not communicated instant death after all. If Edison could definitively monstrate that even the massive body of an elephant could be electrically felled in a single lightning stroke, North Americans would find it easier to accept not only the switch, but the awesome bids of electricity and cinema to overhaul the existing material and symbolic infrastructure of modern life. Edison had to prove that alternating current was fatally dangerous (in order to ruin Westinghouse) and yet, thanks to electricity's unprecedented immediacy and interiorized effects, painless (in order to appease new conditions of sympathetic treatment pressured by humane societies). Further, he sought to frame the motion picture camera as a documentary eye impassively recording an inevitable event, rather than as co-producer of the animal passion it was covering. The cultural desire for a humane technology of death was in this sense historically interwoven with the aesthetic construction of the technological media as neutral and unmotivated.

Political antagonisms stirred up by biopolitical methods of capital punishment (as well as by the startling bids of electrical and cinematic media to deliver or capture the surplus affect of animal death) were arguably managed through the mimetics of monstration, which pushed for cultural consensus through the transparent figure of the sacrificial animal. The "scapegoat mechanism" has been theorized as a primal mimetic impulse by Rene Girard, who views scapegoating as a cathartic valve through which pent-up social violence is discharged. For Girard, mimesis is the transferential mode through which affect (desire, envy) escalates within a community, placing the social life of the group at risk until it finally loads its tensions onto a human or animal scapegoat, and sends it to death or into exile. The prosecutions, punishments, and ex-communications of animals in secular and ecclesiastical courts of pre-modern Europe seem to corroborate Girard's idea that the scapegoat is made to carry a burden of social affect. One of the contexts in which Girard constructs his theory of the scapegoat is the plague-ridden Europe of the middle ages. Intense human scapegoating during the period of the bubonic plague was provoked, Girard notes, by the mystifying means of its transmission. The plague appeared to travel transferentially, so that death could be contracted, it seemed, by tele-communication. In a panic to locate and stem the material transmission of the disease, numerous communities seized upon their Jewish members and accused them of conspiring to secretly contaminate the water systems.

In the Edison era, the dangers of contagious social contact are arguably evoked by new technologies of communication – telephony, electrocution, cinema, radio. Rather than reading Topsy's electrocution as the inevitable result of an universal scapegoat mechanism, it is far more telling to analyze it in the specific context of emerging communications media and the "violent immediacy" they both promised and threatened through a mystification of their material means (Seltzer 11). The case of Topsy calls to be read as a calculated exercise of mimetic power designed to resolve social antagonisms sparked by the powers of tele-technology, and to bring troubling political issues to aesthetic resolution.

To recall the extent to which the transmissions of the new technological media appeared to have ascended beyond any material and political conditions of production, one only needs to recall how even the electricians who designed them represented their powers as unearthly. Alexander Graham Bell's assistant, Mr. Watson, wrote in his autobiography that the apparatus he and Bell were building "sometimes seemed to me to be possessed by something supernatural" (Ronell 256). Nikola Tesla, the electrical genius whose theory of alternating current was rejected by Edison (but not by Westinghouse), believed in extraterrestrial transmissions and invented an early system of wireless communication with which he claimed to channel signals from outer space. As with the bubonic plague, an inability to discern the material means of technological communication inspired wonder and fear. Amidst the popular awe and suspicion attending technologies of telecommunication, Edison choreographed what seemed to be a self-evident event designed to give a down-to-earth demonstration of electrical communication by way of its transparent effects on the animal body. He hoped to prove once and for all alternating current's deadliness to Westinghouse supporters, its efficiency to state of New York penal authorities, and its painlessness to animal sympathizers. His monstration anchored technological communication in the primal scene of an animal sacrifice. Yet by riveting his camera to the suspenseful moment between animal life and death, body and soul, terrestrial and extraterrestrial existence, Edison only re-mystified the power of electrical and cinematic communication.

Thus rather than a victim of a compulsive social mechanism, as Girard theorizes scapegoating, Topsy needs to be considered as a victim of cultural and political agencies seeking to mystify and manage the mechanics of technological communication. Many theorists of the twentieth century, including Girard, fetishize mimesis as an anthropological underwiring, only secondarily delimiting the political logics and material means through which affect is socially incited to achieve specific effects for power. In this, mimesis, like the plague, gets shrouded in the epidemic mystique which envelops the material techniques and histories of affective communication.

Historically singled out for public electrocution by a hesitation in speciesist discourse as Thompson and Dundy entertained the idea of a criminal animal, and by Edison's interest in any opportunity to secure belief in the immediacy of technological communication (and its safe electrical and cinematic providers, the Edison Electric Light Company and Edison Manufacturing Company), Topsy was exempted from mere slaughter to suffer, instead, an example. Topsy's exceptional treatment raises the not unrelated issue of exeptionalism itself, particularly as it pertains to two exercises of pathological power sensitive to scrutiny at the time: the immunity of the State in its exclusive right to exercise the violence it punishes in its citizens (i.e. via capital punishment), and the immunity surrounding the animal capital being made off of the "non-criminal putting to death" of livestock through the mass methods of industrial slaughter (Derrida, "Eating Well" 112). If animals can be said to be the "sacrificed foundation…of the symbolic order," negatively defining the field of "human order, law and justice" from which they are excluded (Derrida, "And Say…" 134), both the State's and capital's ability to execute a "non-criminal" putting to death of humans and animals are likewise founding exceptions of modern symbolic law and order. Speciesism, in other words, is the negative template of a logic of exceptionalism which works to authorize, naturalize, and excuse certain pathological exercises of power against humans and animals. The fragile ability of state and capital to remain innocent of the violence of taking life while testing new electrical methods for doing just that gets discursively entangled, then, in the anomaly which the electrocution of Topsy constitutes within modern discourses and institutions of speciesism. It is perhaps not merely coincidence that a discourse of criminality was projected onto Topsy at the critical moment when Edison was conspiring with New York penal authorities to institute a controversial new technology for the non-criminal and humane putting to death of humans and animals.

Because such a polyphony of high-stakes interests and cultural confusions overtly and covertly converged around her, Topsy could not go the way of America's domestic animal capital. The execution of Topsy managed – but also exposed - the instabilities of a culture adjusting to a biopolitical production of nature. Over the body of Topsy in "Execution of an Elephant," cinema and electricity converged as complicit currencies: the ability of the first to render a new degree of sympathetic identification with the animal hinged, paradoxically, upon the pathological ability of the latter to execute its "quick and painless death" (*The Commercial Reporter* January 5, 1903).

In 2003, for the hundredth anniversary of her electrocution, Topsy was resurrected in a memorial tribute organized by the Coney Island Museum. A coin-operated peep-hole machine designed by Lee Deigaard – the "Topsy Mutoscope" – was added to the permanent exhibits at the Museum. Evoking an era of pre-projection cinematic viewing, and putting the Topsy footage into motion only with the deposit of money, the "Topsy Mutascope" makes explicit the voyeuristic consumption of an animal subject not only long dead, but in relation to the colluding logics of sympathetic and pathological communication, always "already dead" (Derrida, "And

Say…" ftn. 145). Nevertheless, the 10-second "Electrocuting an Elephant" has powered ghostly regenerations of value over the past century, incorporated into documentary and independent films, digitized and recirculated on the worldwide web by animal liberationists, as well as studied in my own work here.[33] The pity and indignation which the recirculated footage of Topsy is calculated to arouse today runs a danger of being less oppositional to Edison's cinematic project than it imagines itself to be. For Topsy continues to be circulated as a "shocking" and pathetic signifier, an affective currency which I've tried to show is dangerously subtended by its pathological exceptions.

Telus Mobility Inc.

At the dawn of the twenty-first century, yet another sympathetic discourse of telemobility revives "old dreams of magic communication," in the words of J. Hillis Miller, rearticulating the technological media to a fantasy of animal telepathy - mesmerizing, unconscious, and "electric" ("Automobilities of the Text" 84). This time, however, it is a digital and electronic traffic which gets identified with the "communicative powers of animal magnetism," and whose material conditions are spirited away (Lippit 101).

In the advertisements of Telus Mobility Inc., the mode of monstration which I have traced through Galvani and Edison is biopolitically adjusted to accommodate the unscripted behaviors of live animal actors. Telus Mobility animals are

> …never forced to perform in any way they do not want to. Our most successful footage is often of the animals simply being themselves….Digital imaging is sometimes used…but it is rarely needed to enhance the natural actions of the animals.

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[33] I am aware of two films in which the original Topsy footage appears: a PBS documentary video directed by Ric Burns - *Coney Island: The Ups and Downs of America's First Amusement Park* (1991) - available both from PBS and in the Coney Island Museum shop, and the Errol Morris film *Mr. Death: The Rise and Fall of Fred A. Leuchter, Jr.* (1999).

(<http://www.telusmobility.com/about/company_background_ff.shtml January 2004)

The training of animals has become fully transparent and impeccably humane. So transparent, in fact, that it becomes virtually impossible to tell the difference between a cued performance and "the natural actions of the animals." Digital imaging will now correct any slight differences that may arise between how animals choose to act and the aesthetic agenda Telus has in store for them, as opposed to the terminal correction of Topsy. Animals no longer have to die as bodies, it would seem, to rise as signs; the willing bodies of live animal actors are in uncoerced unison with their sign-function. Or so it would appear unless, as I will argue in the case of Telus Mobility, a pathological economy of telecommunications culture is no longer captured in the frame of a single monstration, but is profoundly displaced and scattered across a geopolitical puzzle in which it becomes ever harder to piece together the material relations supporting the animal signs of telecommunication. Yet no less than Galvani's wet battery and Edison's celluloid event, Telus's advertisements inadvertently leave clues to a "material unconscious" which I will work to develop (Brown 14).

Telus's ad campaigns call, first off, to be viewed as a media discourse inside a media discourse, an agency within a larger promotional agency – advertising culture – itself staking biopolitical claims to animal life. As I've already suggested, mass media inextricably implicated in the reproduction of capital across the twentieth and twenty-first centuries (photography, film, advertising) increasingly pursue a social immanence which mimics the biological immanence of animal life. Yet the immanence emulated by the media isn't that of mortal, corporeal animal life, but rather that of spectral, electric animality - animal life construed as a field of pure energy rather than corruptible matter. The rapid-fire of vivid, short-lived, and seemingly inexhaustible animal signs volleyed by Telus into social space through hyperactive ad campaigns constitutes a profoundly ephemeral archive. Appearing one day, disappearing the next, the animals in Telus campaigns are subject to the space and pace of the mass media, by virtue of which they get constituted as spectral, undying signs without history, duration, or future. The animal signs in the Telus archive embody a logic of the media which indeed produces an effect that animals exist in a "state of *perpetual vanishing*," in Lippit's words (1).

The communicativity of the electronic media gets biologically identified, moreover, with animal signals pitched either above or below a human radar. I will look at how Telus recasts media as mediumistic by staging communication as an "*animalséance*," to borrow from Derrida, in which spectral energies travel transferentially across sending and receiving poles ("The Animal 372). If automobility aestheticizes the act of transportation as an animal drive, in telecommunications culture, as Régis Debray notes, the "act of communication" is aestheticized as a sudden, effortless bolt of code (45).[34] As the case of Telus can be provoked to show, however, the retooled animal code of advanced telecommunications capital is no less contingent upon bloody material histories.

On the web page for Taxi Advertising and Design of Toronto, the agency behind Telus Mobility's prolific ad campaigns, one reads: "Learn how frogs, bugs and ducks transformed a wireless company into one of the most valued brands in the telecommunications industry" (<http://www.taxi.ca> January 2004). Indeed, a seemingly infinite visual string of flora and fauna thread together Telus ad campaigns, unified by their hallmark "nature": crisp, colourful, and often comical animal and plant species on clinically white backgrounds, with the Telus tagline "the future is friendly." Telus's brand ecology enlists exotic species associated with Southern latitudes, species imported into the de-contextualized white space of technological culture. Frogs, chameleons, monkeys, parrots, turtles, sloths, and penguins by turn enliven a range of telecommunications wares and services. Yet rather than fresh and innocent, the mimetic species which regularly feature in Telus ads - monkeys, parrots, chameleons – carry affective residues from colonial discourses of mimesis. The "honest labour" of making mimetic sense which animal signs are again called to perform is not innocent at all, but works to naturalize a neo-colonial order of telecommunications capital through an organization of mimesis inherited from colonial regimes of power (Taussig, *Mimesis* xviii). A colonial organization of mimesis consisted, among other things, in mapping the biological and behavioral mimicry of species such as chameleons and parrots onto Europe's others in order to frame their *cultures* as *natures*.

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[34] Debray is fiercely resistant, as am I, to the spiritualization of telecommunication as an immaterial production, exchange, and consumption of bodiless code. What I might add to Debray's analysis, however, is how the telecom model overlaps with an ethological science of animal communication as a system of emitted signals rather than mediated signs.

Although its animals are presented as a new pictographic sign language transcending cultural and political boundaries to inaugurate the limitless telecommunicability of a global marketplace, what Telus calls its "spokescritters" are in fact saturated with virulent historical associations.[35] Telus's circulation of monkey signs, for instance, risks affectively reactivating North American stereotypes of black culture as simplistically mimetic, and of Africans as "simianlike," given the omnipresence of monkey signs in nineteenth and twentieth-century discourses of biological racism construing black people as closer in kind to primates than to people.[36] The racial typing of animals and animal mimicry can be traced, as I've said, back to broader histories of colonialism and to Europe's efforts to keep mimesis in "some sort of imperial balance" by mapping slavish copying onto non-white, non-Europeans, as part of their construction as subhuman and in need of development (Taussig xv). While Telus animal signs play innocent, I aim to pressure them into exposing what they would efface: the violent relations of race, labour, and nature through which telecommunications capital renders new technological mobilities.

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[35] See Telus's assurance of its respectful handling of its "spokescritters" on its web page: <http://www.telusmobility.com/about/company_background_ff.shtml> (January 2004).

The visual sharpness of the animal signs in Telus advertisements signifies the technological fidelity promised by its telecommunications media, a fidelity that is again and again proven against an animal's acuity in the style of the RCA Victor logo I glance at in "Automobility." In a 15-second television spot created by Taxi in 2001 - "Introducing photo caller ID" – a hedgehog carefully approaches a Sanyo 5000, the first mobile phone with a full-colour screen. The phone's screen is upright, facing away from the viewer and towards the hedgehog. Suddenly the hedgehog bristles, stops, and retreats; the ad cuts to the phone's screen where its photo ID feature shows the caller to be a skunk. The live hedgehog is daunted by the superlative fidelity, or "liveness," of the skunk confronting it on the screen (Simpson 1997). The phone's technological virtuosity promises more than just visual and auditory transmissions; it promises (threatens?) to communicate smell as well, to shower the receiver with nature's sensorium. In the arena where animal and technology are put to such a biological test of verisimilitude, the hedgehog cedes to the overpowering mimetic fidelities of telecommunications media.[37]

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[36] Henry Louis Gates nevertheless works to recuperate a black critical praxis from the racist currency of the sign of the simian, by theorizing "the Signifying Monkey" as an "ironic reversal of a received racist image in the Western imagination" (*Figures in Black: Words, Signs, and the 'Racial' Self* 236).

[37] The hedgehog ad can be viewed on-line at: <http://www.strategymag.com/aoy/2001/taxi/telus/> (January 2004).

Cary Wolfe writes that "the discourse of species…is rearticulated upon the more fundamental ur-discourse of the 'organization of mimesis' by the world system of global capitalism in its postmodern moment" ("*Faux* Post-humanism" 145). Nowhere is it clearer that animal signs encipher a charged discourse of mimesis than in a series of 2004 ads for the Telus camera phone, a multi-media phone coupling photographic with telephonic capabilities. The mimetic species which feature in this series of ads are vivid lizards, chameleons whose photosensitive skin becomes the splitting image of its surroundings. In each ad, a lizard is shown blending in with the object next to it, an object which is often, but not always, a camera phone. In one exception, a chameleon is shown "becoming" a blue-swirl lollipop in time-motion stages, stages recapitulated in the hyphenated caption: "Inexplicable? Send-a-pic-able" (see Figure 13). This Telus ad cries out to be read in the context of the biological theory of "mimetism" elaborated by Roger Caillois in his 1938 essay "Mimicry and Legendary Psychasthenia." As I trace in the Introduction to my dissertation, Caillois turns to the study of mimetic insects to theorize the "pathology" of animal mimicry (17). Insects mimicking the appearance of leaves, twigs, or stones demonstrate, for Caillois, an animal death wish ("*le mimetisme*") compelling them to approximate inanimate life, stasis, and even death (25). Telus ads reveal a similar fascination with the notion that mimetic animals are instinctively compelled to become thinglike – whether in stages, as with the lollipop lizard, or instantly, as with a chameleon in a different ad which has become of a piece with shards of colourful porcelain lying around it.

Denis Hollier discerns, however, that Caillois's "entire analysis proceeds as if playing dead and being dead were one and the same" (13). The "vital difference" glossed over by Caillois also marks the difference between the aesthetic discourse of

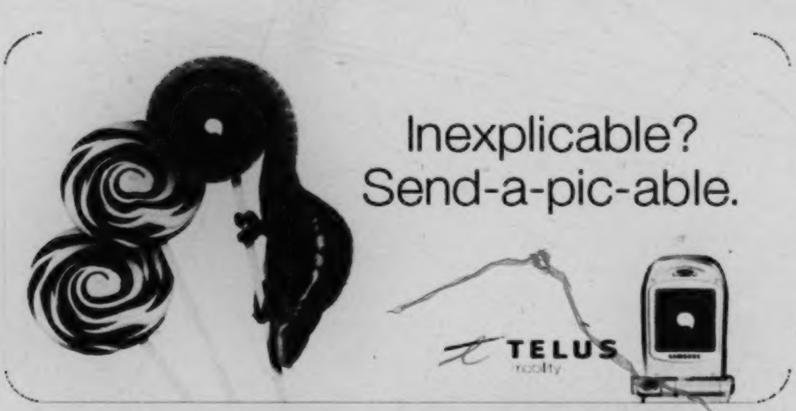
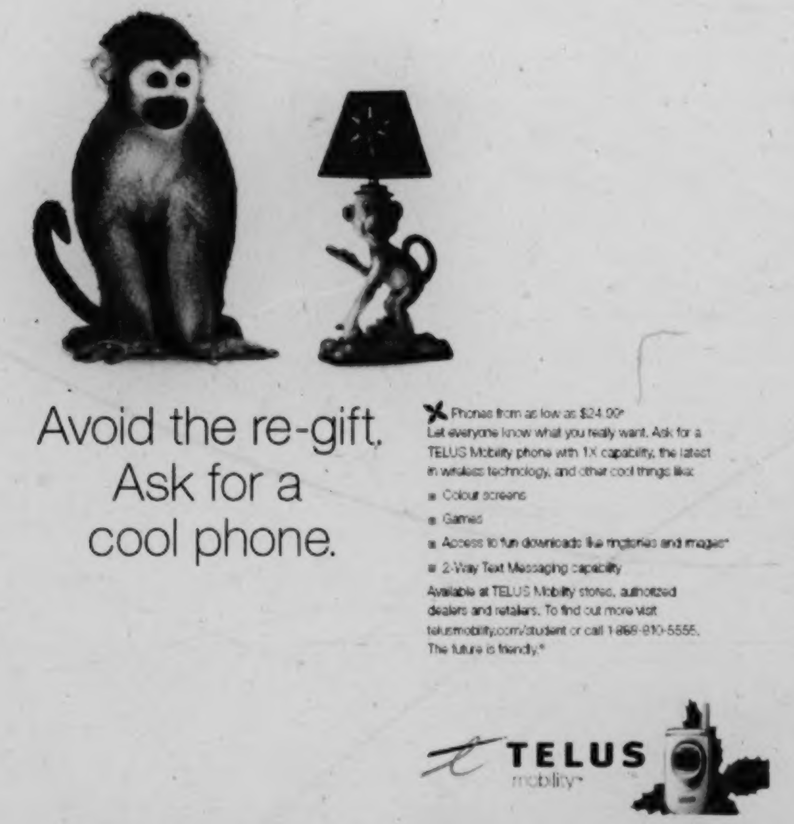

Inexplicable?
Send-a-pic-able.
TELUS
mobility

Figure 13. "Inexplicable? Send-a-pic-able." (Image reprinted with the permission of the Telus corporation, on the condition that it be clear that my interpretation of the ad does not reflect the views of Telus.)

animal mimicry mobilized by Telus camera phone ads, and a material politics of rendering (Hollier 13). In reading the Telus discourse alongside the work of Caillois, what comes into view is how a biological discourse of mimesis operates to naturalize the material conditions and effects of capital, effects which Marx strove to politicize with his theory of commodity fetishism: the animation of commodities and the reification of nature. The discourse of animal "*mimetisme*" at play in the progressive thingification of the Telus lizard dangerously poses the becoming-animal of capital and the becoming-capital of animal life as a biological compulsion, rather than as a profound exercise of mimetic power.

The naturalization of capital via a biological discourse of mimesis also appears in a 2002 Telus ad promoting various gifts for the Christmas holidays (see Figure 14). Above a caption asking "Looking for more bright holiday ideas?" (later re-circulated with a different caption, "Avoid the re-gift. Ask for a cool phone") sit a pair of squirrel monkeys, an original beside a reproduction. The latter is in the petrified shape of a lampstand, a not-so "bright idea" as soon becomes clear. The live monkey looks with dismay at its kitschy sidekick, less than ecstatic at receiving yet another commodity whose attempt to faithfully ape its future owner is precisely why, as a gift, it misses the mark. The clunky lamp, belonging to an outmoded era of stationary goods tethered to fixed power outlets, is no longer a fit, the Telus ad suggests, for the cordless, wireless mobility of the animal.



Phones from as low as $24.99*
Let everyone know what you really want. Ask for a TELUS Mobility phone with 1X capability, the latest in wireless technology, and other cool things like:

- Colour screens
- Games
- Access to fun downloads like ringtones and images*
- 2-Way Text Messaging capability

Available at TELUS Mobility stores, authorized dealers and retailers. To find out more visit telusmobility.com/student or call 1-866-810-5555.
The future is friendly.®

Figure 14. "Avoid the re-gift." (Image reprinted with the permission of the Telus corporation, on the condition that it be clear that my interpretation of the ad does not reflect the views of Telus.)

An old mimetic catalogue of mechanical reproductions has become the ironic content of the Telus ad, which elaborates a meta-discourse on mimesis itself in marketing the greater powers of electronic and digital media.[38] The ad suggests that the monkey makes a better mimetic match with a Telus "cool phone," which bears far more than the lamp's physical family resemblance to another simian; a cool phone is no mere analogue. The secret kinship of monkey and phone is that of an invisible shared code, a secret mimetic resemblance from within which the mirror relation between biological originals and faithful copies is made to look glaringly and garishly obvious. The ad self-consciously distances mobile phones from the now stale charms of analogue reproduction, promoting a new order of telepathic communion which transcends crass mimetic correspondence.

Telus repeats the above scenario, with a difference, in a 2003 holiday season ad: "The perfect gift for those who have everything." Instead of the mis-match of a squirrel monkey and an imitation lamp, however, the 2003 ad depicts the mis-match of a live piglet and a pile of piglet imitations (a stuffed piglet, a piggy bank, etc). Instead of suggesting the gift of a Telus Mobility "cool phone," moreover, this ad suggests the gift of a camera phone (see Figure 15). Whereas the 2002 ad with the monkey brings the Telus ur-discourse on aping into view in a way that the ad with the piglet does not (pigs not canonically connoting mimesis the way monkeys have been made to do), Telus's periodic deployment of North American domestic animals such as pigs, goats, and rabbits marks an even more loaded mimetic moment. If parrots, chameleons, and monkeys model an era of mechanical mimesis, piglets model electronic and digital culture as the reproduction, or rather creation, of life itself. While the simian inscribes a canonical discourse of mimesis as a gestural, rhetorical mirroring-back, the piglet marks a new biopolitical motion to transcend representationality itself. The image of the piglet communicated by the camera phone is not a mirror image, but a first nature emerging pink with presence from its digital birth. By mocking analogue culture's dated ability to mechanically reproduce life, this Telus copy raises the mimetic claims of telecommunications culture to the constitution of new life itself. Evoking other popular texts (the novel *Charlotte's Web*, the *Babe* movies) in which pigs, far from wallowing in filth and stupidity, are portrayed as intellectually razor-sharp and affectively acute, the Telus ad suggests that the piglet is the very embodiment of smart technology.

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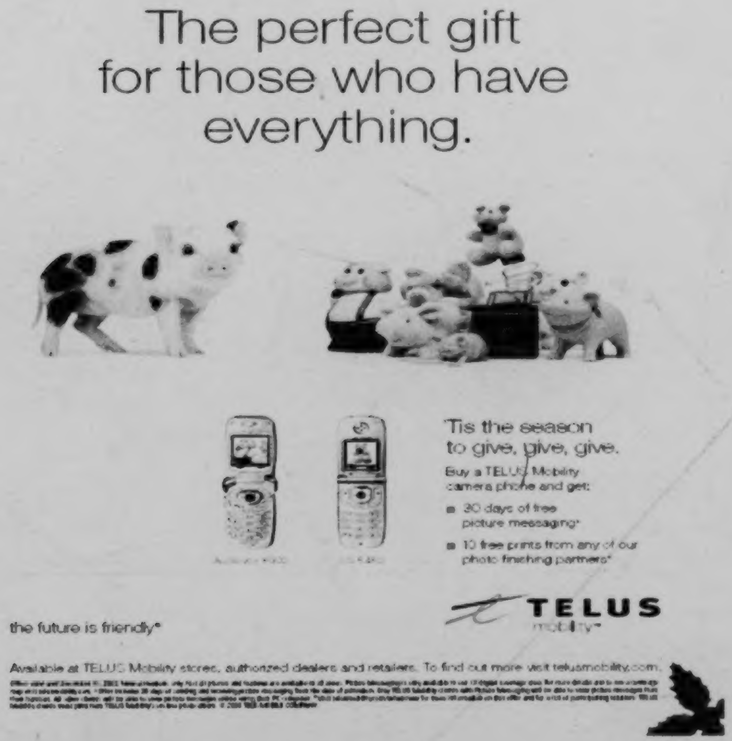
[38] As Marshall McLuhan argues in his analysis of an electronic age, "[t]he 'content' of this new environment is the old mechanized environment of the industrial age" (*Understanding Media: The Extensions of Man* vii).



The perfect gift for those who have everything.

'Tis the season to give, give, give.

Buy a TELUS Mobility camera phone and get:

- 30 days of free picture messaging*
- 10 free prints from any of our photo finishing partners*

the future is friendly®

TELUS mobility™

Available at TELUS Mobility stores, authorized dealers and retailers. To find out more visit telusmobility.com.

Figure 15. "The perfect gift for those who have everything." (Image reprinted with the permission of the Telus corporation, on the condition that it be made clear that my interpretation of the ad does not reflect the views of Telus.)

Yet even as Telus ads turn mechanical reproduction into their ironic content in order to market the advanced mimetic powers of new technologies, the electric piglet almost too easily supplies its own double: the bacon-breeder or gene machine subjected to unprecedented degrees of material and reproductive management in advanced capitalist culture. The dewy piglet's historical body-double mediates the meat life of capitalism to the tune of 21,148,704 pigs per annum in Canada alone.[39] Yet the piglet's double connotation as smart technology and as mere bacon doesn't pose a problem; Telus's camera phone ad seems to confidentially invite a realization that in the new biopolitical world order, capital's conditions of production have fused with the conditions of life itself. Aesthetics and genetics have become one double-sided currency of advanced capital via its iconic control of animal code.

Part of the comic surplus generated by Telus ads stems from their simultaneous appeal to cosmopolitan human subjects to identify with *and* differentiate themselves from an animal kingdom.[40] If Telus animals are shown to be, like humans, technology users, they are also humorously depicted either puzzling over outmoded analogue technologies such as hardbound encyclopedias and tangled cassette tapes, or as embodying the literal sense of a figurative expression. In a more recent Telus camera phone ad, for instance, the invitation to "share dirty pictures" shows a piglet literally covered in mud. The currency of the smart animal-technology easily switches into the currency of the animal stupidly enmired in a world of substances. In the blend of anthropomorphic generosity which invites the identity of animal and human technology-use, and the careful, anthropocentric depiction of animals' grasp of technology as a prehensile grab for the banana, resides the humorous, liberal humanism of the Telus campaign. Yet ultimately the animals in Telus ads, like the mobile phones they often morph into compliments of techniques of digital rendering, are commodified objects of consumption.

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[39] 2003 slaughter numbers posted by the Government of Canada on their agriculture website, under "Hog Statistics at a Glance" (<http://www.agr.gc.ca> March 2004).

[40] The animals in Telus ads, like the colonized other theorized by Homi Bhabha in "Of Mimicry and Men; the Ambivalence of Colonial Discourse," are expected to look "*almost the same*" as humans, "*but not quite*" (*The Location of Culture* 86).

In a different ad cluster, Telus nevertheless returns to the species most representative of its discourse on mimesis: monkeys. Again, the telecom model of sending and receiving poles across which animal signals effortlessly bounce - a model which edits out the "*violent* collective process" of material transmission (Debray 45) - is configured by way of two monkeys.[41] Shown crouching behind a cluster of bananas, or tossing bananas back and forth between them, the monkeys play upon the ludic resemblance of banana and telephone until they themselves evolve into the cool phones of the caption-titles. The consumption of mobile phones, meanwhile, assumes something of the necessity of a subsistence diet through the identification invited by Telus ads between monkeys grabbing for bananas and a cosmopolitan clientele seeking user-friendly technologies. Via this "aesthetics of consumption" the North's culture of technological consumption is innocently identified with the biological imperative to eat (Seltzer 122).[42]

The "primate ethograms" favoured by Telus can be pressured to speak, however, to the violent neo-colonial relations of telecommunications capital they work to render non-apparent (Haraway, *Primate Visions*139). For its deployment of simian code inadvertently links Telus to a racist primatology geopolitically organizing mobile phones' material conditions of existence, and marks a site where telecommunications capital can be made to incriminate its own mimetic productivity in the vicious politics and economics of Congolese coltan, civil war, and bushmeat. The violent material conditions of telemobility in the twenty-first century are not, as with the discourses of Galvani and Edison, directly exacted from animal flesh. It is indirectly, through the artisanal mining of coltan in the Democratic Republic of Congo, that animals, land, and labourers suffer the pathological costs of a telecom aesthetic of "*painless transmission*" (Debray 46). Coltan is the thread that I take up to develop the material unconscious of electronic and digital mobility.

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[41] In Régis Debray's sustained critique of the model and semiotics of "communication," he challenges "the notion of 'act of communication' understood as a dual and punctual relation between a sending pole and receiving pole, with only a code common to the line's two extremities…" (*Media Manifestos; On the Technological Transmission of Cultural Forms* 44).

[42] As Mark Seltzer notes: "One of the most evident paradoxes of the insistently paradoxical notion of a 'culture of consumption' is the manner in which a style of life characterized by its excessiveness or gratuitousness – by its exceeding or disavowing material and natural and bodily needs – is yet understood on the model of the naturally body and its needs, that is, on the model of hunger and eating" (*Bodies and Machines* 121).

The mining of coltan appends the history of Belgian colonialism in the Democratic Republic of Congo (from the 1885 Berlin Conference to the Congo's independence in 1960) with neo-colonial economic occupations significantly related to telecommunications capital. Coltan extraction in the Congo is artisanal in that mining methods have become, through the throes of civil war, de-institutionalized from State controls, turning into an ad-hoc series of volatile camps run by shifting military and rogue armies. Short for colombo-tantalite, coltan is a highly conductive mineral ore found in 3-billion year old soils. The tantalum derived from coltan is a corrosive-resistant precious metal used to make micro-capacitors, electronic components that control current flow inside the miniature circuit boards of computers and electronic products such as mobile phones, pagers, camcorders, and game consoles. Revitalized geopolitical interests in the eastern Congo as resource colony and mineral support of capital's new informatics and telecommunications empire append former colonial trades in slaves, ivory and rubber from when this region of Africa was under Belgian rule. Coltan is legitimately mined in Australia, Brazil, and Canada, but it is more cheaply extracted, by virtue of deeply entrenched neo-colonial plunder economies, in the Congo.

A 2002 United Nations Security Council Report indicting the latest pillaging of the Congo's natural resources, *Final Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Ohhter Forms of Wealth of the Democratic Republic of the Congo*, links multinational mineral corporations and telecommunications capitals to illegal trades in coltan. The electronics industry uses approximately 60% of the world's supply of coltan, with mobile phone manufacturers in turn using the bulk of that percentage. Corporations such as Nokia, Motorola, Compaq, Dell, IBM Ericsson and Siemens are primary users of tantalum capacitors which invariably lead back to the Congo.[43] A manufacturing genealogy of Telus Mobility "cool phones" links them to giants like Nokia, Samsung, and AudioVox (the maker of the Telus camera phone), manufacturers whose tantalum is supplied by multinational mineral corporations such as H.C. Starck (Germany). Mineral multinationals such as H.C. Starck are in turn supplied by myriad illegal traders opportunizing off of "a variety of forced labour regimes" working in artisanal mining camps controlled either by Rwandan and Ugandan armed groups who invaded eastern Congo in 1998, or by Congolese militants operating under the rubric of the "war effort" to loot natural resources (UN *Final Report* 15).[44]

An overvaluation of technology markets spurred by a new generation of mobile phones and "a rush on computer games (Sony Playstation II)" triggered a coltan boom from 2000-2002, allowing rebel groups in eastern Congo to haul in as much as $20 million/month for weapons purchases and private profit (IPIS Report, "Supporting the War Economy…" 9). While the soaring market value of coltan made it a lucrative source of funding for military factions invested in the economics of a permanent state of emergency in the Congo (as claimed by the UN Report), further along the commercial chain overdemand for coltan held up Sony from releasing its PlayStation II on schedule, a mere ripple effect of the devastating material elsewhere of electronic consumerism.[45] Even with a fall in coltan prices in late 2001, the use of child and convincible labour working under the omnipresent threat of violence continues to make Congolese coltan the cheapest and most attractive global source; in the vast difference between the "costs" of Congolese nature and labour and the market value of mobile phones and other electronic products, capital makes the most of itself.

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[43] A 2002 IPIS Report (International Peace Information Service), "Supporting the War Economy in the DRC: European Companies and the Coltan Trade," helped to organize lobbies against some of these corporations: "Leading international corporations using tantalum capacitors such as *Alcatel, Compaq, Dell, IBM Ericsson, Nokia* and *Siemens* are called upon to immediately refrain from buying components containing tantalum originating from occupied Congo and its neighbours…" (7). While Nokia and Motorola publicly pledged to stop buying from suppliers who could not certify that their coltan did not come from the Congo, the commercial supply chain is so convoluted and murky that few take their statements as more than lip service to the problem.

[44] The Rwandan Patriotic Army (RPA) and the Ugandan People's Defence Forces (UPDF) were showing signs of withdrawing from the eastern Congo when the 2002 UN *Final Report* was submitted. Yet as the Report states, "the necessary networks have already become deeply embedded to ensure that the illegal exploitation continues, independent of the physical presence of the foreign armies" (28).

In 2001, a group of Belgian NGOs organized a worldwide campaign - "No blood on my mobile! Stop the plundering of Congo!" - with the aim of pressuring multinationals into certifying (i.e. legalizing) coltan production so that benefits would return to the people of the Congo, as opposed to being expropriated by the "elite networks" named in the UN Report (5). At the same time, international wildlife groups such as the Dian Fossey Gorilla Fund (DFGF) mobilized international concern for the lowland gorillas that Fossey had helped to make virtually synonymous with wildlife conservation in Africa. During the coltan boom, miners in the numerous artisanal coltan camps in eastern Congo came to rely heavily upon bushmeat for food, including species living within Park boundaries.[46] Concerned with the effects of illegal mining on gorilla, elephant and other wildlife populations in the Kahuzi-Biega

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[45] "The cost of a call," *The Guardian*. Monday August 20, 2001.

[46] As Kofi Akosah-Sarpong notes, "[c]oltan has also created a boom in prostitution in DRC's Ituri rain forest region of Okapi Faunal Reserve (a protected area) and put about 4,000 okapi forest elephants, 13 species of monkeys and about 4,000 Mbuti or Twa (pygmies), a hunting and gathering ethnic group, in danger" ("Coltan, Poverty, War and DRC" <http://www.expotimes.net/issue010926/business2.htm> January 2003).

National Park, the DFGF (with the Born Free Foundation) prepared a report entitled "Coltan Boom, Gorilla Bust; the Impact of Coltan Mining on Gorillas and other Wildlife in Eastern DR Congo" (2001). Its call for "gorilla-friendly" coltan production, more than the UN documentation of illegal economic networks and human rights alerts of the atrocities of war in the Congo, aroused popular opinion in North America.[47] Moved by the sign of endangered animal life, Hollywood movie star Leonardo DiCaprio gave his high-profile endorsement to the Dian Fossey Gorilla Fund.

In a recent piece of television reportage entitled "Gorillas under threat," the narrator begins: "There is a sinister link between cell phones and the last remaining gorillas in central Africa" (<http://www.durbanprocess.net/en/resources.html> April 13, 2003). Most media coverage of coltan mining in the Congo has, following the strategy of the DFGF, employed the lowland gorilla as an affective technology to provoke sympathy in cosmopolitan world citizens. As an affective technology, however, the gorilla also resuscitates a racist "primatology," re-encoding the supreme humanity of white cosmopolitan culture even as aspects of that culture are being called into account. In response to the damning linkages made between cell phones and the loss of the lowland gorilla (more than any other living animal, perhaps, stuffed with anthropological triggers and emotional codes strategic to the discursive hegemony of western culture across colonial and neo-colonial periods), multinationals such as Motorola, Ericsson, Nokia, and their components manufacturers have sought to publicly reassure a global public that their products do not use tantalum from the Congo. In an open letter to the Dian Fossey Gorilla Fund offices in London (and cross-posted on Leonardo DiCaprio's website), Motorola nevertheless easily displaces the blame:

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[47] The "blood" invoked in the "no blood on my mobile!" campaigns took on new value and meaning with the participation of the Dian Fossey Gorilla Fund. Media coverage in the west, particularly, recited the slogan in relation to the tragedy of the lowland gorillas. The blood of the Congo's threatened lowland gorillas arguably provoked more sympathy than the blood of the estimated 3.5 million Congolese killed in three years of civil war.

> On your website, you ask that companies 'simply not turn away from raw materials mined in the region, but rather demand gorilla-friendly tantalum mined in a way as to benefit the environment and provide better economic returns to peasant miners.' The solution that you request is a difficult and immeasurable one to achieve. The roots of the conditions in the Congo are steeped in political and social unrest and guerilla fighting between warlords who profit from illegal mining. If we buy materials from the region, we have no way to ensure that the warlords will not profit and continue to perpetuate the lawlessness and despicable actions that we condemn. (<http://www.durbanprocess.net/en/resources.html> January 3, 2004)

By suggesting that the fate of innocent African "gorillas" is at bottom in the hands of lawless African "guerillas," Motorola effectively absolves itself from the "roots of the conditions" in the Congo, presenting itself as a law-abiding corporate entity who engages in honest trade as opposed to black "warlords who profit from illegal mining." New configurations of familiar racist slippages between "gorilla" and "guerilla" emerge in the Motorola letter (and in the context of the coltan campaigns, more broadly) to deflect the terrorizing economics of a global trade in telecommunications off of the transnational corporation and onto the black warlord. African "guerillas" are animalized, their violence and greed removed from historical contexts of colonization, decolonization, nationalization, and most recently, the pernicious power of global markets in new technologies (all heavily manipulated by European, American and, increasingly, Asian capital). "Guerillas" thus become de-politicized and animalized primitives in Conrad's timeless "heart of darkness." The easy slippage between "guerilla" and "gorilla" returns the conflicts in the Congo to a state of nature outside of civilized history, where alpha-males periodically terrorize their monkey family, sating an innate aggressivity on their own kind (human and gorilla populations serve equally as their "kin" in this primatology). With such guerillas, suggests Motorola, rational exchanges are not possible, a racist rhetoric belied by the very effective business associations between multinationals and "warlords" detailed in the UN Report.

If, under the pressure of campaigns calling for "gorilla-friendly" coltan mining, Motorola reactivates a discourse of what Donna Haraway calls "simian orientalism" to disavow the incommunicable violence of a guerilla-terrorized Congo as one of telecommunication capital's material conditions and effects, the conservationist politics that exposes the blood on the mobile in the name of twentieth-century primatologists such as Dian Fossey is itself historically imbricated in the violence – and the fantasy - of telecommunications culture (*Primate* 11).[48] As Haraway argues in *Primate Visions: Gender, Race and Nature in the World of Modern Science*, primatology is ultimately a fantasy of communication. "The 'human' quest for the origin of 'man' led late twentieth-century Euro-American women into the vanishing forest gardens at the dangerous historical moment of decolonization," writes Haraway, skillfully decoding the romance surrounding white female primatologists such as Dian Fossey, Jane Goodall, and Biruté Galdikas (142). Haraway probes for just what the popular drama of the white female "emissary" of western man was symbolically and materially mediating for the culture she represented (149). She suggests that the stories of Fossey, Goodall, Galdikas and other white women-scientists making contact with monkeys in the "vanishing forest gardens" of Africa (or western ethology labs) - stories made famous by National Geographic articles and television specials - are emphatically "about modes of

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[48] As Haraway writes: "Simian orientalism means that western primatology has been about the construction of the self from the raw material of the other, the appropriation of nature in the production of culture, the ripening of the human from the soil of the animal, the clarity of white from the obscurity of color, the issue of man from the body of woman, the elaboration of gender from the resource of sex, the emergence of mind by the activation of body. To effect these transformative operations, simian 'orientalist' discourse must first construct the terms: animal, nature, body, primitive, female" (*Primate Visions: Gender, Race and Nature in the World of Modern Science* 11).

communication, not history" (149). The model of communication cached in primatology stories is one in which primates and humans communicate across species difference via a direct sign language – consummated by the primate's "'spontaneous' manual gestures towards the white female man" (140). "The fantasy is about language," writes Haraway, "about the immediate sharing of meanings" (135).

The communications fantasy inherited by the international conservationist politics built on the groundwork of primatologists such as Fossey and Goodall is crystallized in the high-contrast image of a dark animal hand touching a white female hand in a 1984 Gulf Oil ad analyzed by Haraway. Text fleshes out the image: "In a spontaneous gesture of trust, a chimpanzee in the wilds of Tanzania folds his leathery hand around that of Jane Goodall…" (qtd. in Haraway 134). The primate gesture arguably mediates the historic moment at which Gulf Oil, the image of resource capitalism, makes itself over in the image of post-industrial modes of production, i.e. in the image of communication (as well as the moment when capitalist ideology touches hands with conservationist ideology). While the Gulf ad historically predates them, it nevertheless predicts the monkey signs and "primate ethograms" staged in the achieved post-industrialism of Telus ads, whose white spaces are resonant of research labs in which white scientists tutor apes in technologies of communication (Haraway 139). All that is missing from the Telus ads is the white, human hand reaching out to receive the overtures of her monkey subjects; the presence of the sympathetic ethologist is now filled in by a cosmopolitan class of ad viewers and potential mobile phone users invited by Telus ads to safely consume the absorption of animals in their ad campaigns as if behind the one-way glass of the behavioral lab or the zoo.

The primatological fantasy of trans-species messaging in a suspended state of timeless contact meshes, then, with the aesthetic of telecommunication I've been examining in the ads of Telus Mobility. The fantasy of communication Haraway sees acted out in the "vanishing forest gardens" of Rwanda and Tanzania is rearticulated in the different space of Telus ads. As the genealogy of just one material thread in the conditions of existence of telecommunications culture suggests (coltan), when new media corporations capitalize upon such a fantasy of communication they endorse primatology's racist twin: the "simian orientalism" that allows for some parts of the globe to be repeatedly produced as a material substrate, a mine, a heart of darkness mediating the "sunshine technologies" of global culture (Haraway, "Cyborg Manifesto" 153). As the Dian Fossey Gorilla Fund campaign reveals, discourses which draw attention to the blood on the mobile are often themselves historical agents of a double logic, pursuing a fantasy of transpecies signaling which accommodates the violence of forcing the material means of that fantasy onto the still colonial-coloured regions of the globe. This fantasy of the new telecommunications class thus benignly accepts the sacrifice of those long-occupied zones of the globe expected to incommunicably suffer the "body of capital" (Marx, *Selected* 257).

Because "European culture for centuries questioned the humanity of peoples of color and assimilated them to the monkeys and apes," tales of bushmeat disseminated via gorilla-friendly cell phone campaigns easily connote cannibalism (Haraway 154). News of Africans eating gorillas affectively reactivates colonial imaginaries of primitives consuming their own kind in an animal state of nature. While international coltan campaigns overtly aim to make western multinationals culpable for the pillaging of the Congo's wealth so as to trouble electronic consumerism, on a covertly affective level the campaigns strongly invite the racist allegation that Africa's nature – which for international institutes such as the Dian Fossey Gorilla Fund constitutes a global birthright transcending nation-state boundaries - is being gobbled up by Africans.[49] While the campaigns ostensibly tell the latest segment in a postcolonial, self-reflexive story about the West ransacking the Congo, they nevertheless reinstall the rights and concerns of an universal humanity anxiously watching Africa devour gorillas that are living evidence of the "origins of 'man'," not to mention the anthropological object *par excellence* of the West's knowledge-power base. If coltan campaigns alert the world to how the West continues to pillage Africa, the stories they tell of rare gorillas being reduced to mere protein also evoke the image of an enmired Africa literally consuming the fragile resources of a global humanity. The pillaging of mineral resources such as coltan or diamonds pales beside the "raw" act of eating a live animal archive and immemorial link to humanity's genetic prehistory. Thus even in their attempt to incriminate western corporations, coltan campaigns enable a displacement: affectively downloading the pathologies of exploitative capitalism onto a bushmeating Congo.

Global capitalism and global conservationism – both taking occupation of the sign of the animal in pressing new missions of communication – in this way risk operating as ideological allies rather than antagonistic forces. It is important to consider how conservation movements may dangerously aid global capitalism as it readjusts discourses of culture-nature to promote the new hegemony of telecommunications capital. As I've suggested, such readjustments are enacted across a series of rearticulated yet familiar primatologies: the resource colonialism in the Congo supplying minerals used in electronic goods, the voice of reason of a mobile phone manufacturer such as Motorola evading its neo-colonial role in the "roots" of the Congo's problems, the concern over the loss of the lowland gorilla expressed by international conservationists and encoding the West's fear of losing its anthropological archive, and finally, the fantasy of telecommunication hung on the simian signifiers of Telus ads. These different primatologies are culturally diverse and potentially conflictual, yet they are also easily stitched together by a shared vision of global "communication" to supplement rather than challenge powerful constructions of capital's new world order. "Communication is the foundation and goal of the whole innocent-transgressive enterprise," as Haraway suggests (*Primate* 146). The mimetics which calibrate human-animal identity and difference through primatological discourses also manage new international divisions of labour and nature, spiritualizing capitalism's "sunshine technologies" and carnalizing its "heart of darkness" in a retooled but ominously familiar anthropology of culture and nature.

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[49] Nature in the Congo is split, again, between two contradictory discourses: those which seek to help the Congo regain "national" order and state control over its natural resources, and those which continue to view certain natural resources (i.e. lowland gorillas in national parks such as Kahuzi-Biega, which is a World Heritage site) as international birthrights. In the case of the Dian Fossey Gorilla Fund, both discourses are operative at once, concealing a highly interested division of nature. While the Fund would like to see Congolese coltan production nationalized and regulated under state environmental controls, it has no intention of relinquishing the international claims it makes on other portions of African nature, portions whose anthropological and genetic as well as touristic and symbolic capital is safeguarded by western culture under the assumption that it is the property of universal 'man.'

The material unconscious of the Telus discourse must be willfully developed, for the Canadian corporation convincingly conducts its business at a vast remove from the embroiled politics of nature, race, and labour being materially hammered out in the Congo. Telus has been unable to remain as remote, however, from its immediate labour force in Canada. Dissatisfactions of its Canadian employees – triggered by outdated contracts and poor customer service ratings related to dramatic downsizing - carry little of the incommunicable weight of centuries of compound exploitation suffered by the Congolese. One measure of the great material differences in the international division of labour is the communications agency enjoyed by the Telecommunications Workers Union, evinced by the media campaign it mobilized in 2004 to pressure Telus into heeding its demands. Because of its access to communications media, the efforts of the Union to air three mock television ads parodying Telus's animal aesthetic managed to briefly disrupt the corporate composure of Telus.

The three mock ads featured a parrot, a pig, and Dalmation dogs, all performing in the recognizably white space of Telus brand culture, yet brazenly complaining about poor customer service. "Telus wants to use animals to sell its services but even the animals know that things aren't right at the telephone company," a narratorial voice says at the beginning of one Union ad. Unlike the animals in Telus television spots, which viewers watch physically "behaving" in time with catchy popular tunes, the Union animals are less manicured vehicles of the message; bluntly rather than subtly anthropomorphized, they talk. The piglet complains that "Telus customers are getting the shaft," and the parrot squawks "Telus customers are getting plucked," whereupon a suited man suggestive of a shadowy Telus executive yanks it off-screen and does (audible) violence to the animal informant. The ventriloquized animals of the Union ads deploy metaphors of material maltreatment (even rendering) to capture the elusive violence perpetrated by a private corporation which profits from denying that communication is a "*collective* process" contingent upon a public culture composed, among other things, of employees and customers (Debray 45).

No sooner had the Union ads begun airing, however, than the apparent communications agency enjoyed by informational labourers in the global North was quickly constrained by Telus in a rare show of legal force, making momentarily visible the mimetic power which normally covertly polices mimesis and media culture to manage against political antagonism. The mock ads aired on television channels in British Columbia and Alberta for a mere 10 days in January, 2004, before Telus succeeded in obtaining a court injunction prohibiting further airing of the Union spots, on grounds that their use of animals infringed upon the copyrighted image of the company and poisoned its popular brand identity. Brief, and barely noticed, the mimetic excess that broke out in its symbolic economy was quickly sealed off by Telus, who resumed vigorous publicity stints drawing upon a seemingly infinite reserve of animal signs.[50]

"The struggle for ideological and political hegemony," writes Slavoj Žižek, is "always the struggle for the appropriation of the terms which are 'spontaneously' experienced as 'apolitical', as transcending political boundaries" ("Multiculturalism" 30). While the ads of Telus and of its Union have antagonistic "content," they are alike in that they agree to conduct a struggle for hegemony over the mediatized sign of animal life; in this sense, they are complicit monstrations. The particular content spoken or behaved by animal signs seems to come, after all, from a place of spontaneous and apolitical life. Since animals perhaps most encode the innocent place of "life itself" in biopolitical times, as Foucault discerned, even ironic discourses fed through the mouth of an animal sign risk appearing to make propositions from a position of unpower. Telus and its Union mark just two antagonistic agendas among many striving for hegemony over animal signs: environmental and animal rights movements, as much as corporate capitals and their unions, struggle to make their particular ideologies into the universal, innocent content of animal signs. That said, the strategically ironic mimesis mobilized by the Union's ads did at least make momentarily visible capitalism's unofficial and official mimetic order: a competition to occupy "spontaneous" signs of life in which the most powerful players can resort, when necessary, to copyright law, a property logic which in the final event protected Telus's animal brand and managed against mimetic excess.

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[50] After the court injunction, traces of the three Union ads, which aired only in Canada's two westernmost provinces (Alberta and British Columbia), were virtually erased from media memory. Not only were they prevented from airing on television, the injunction prohibited them from being posted on the Union website where they had been briefly available for viewing. *The Vancouver Sun* ran a story by Bruce Constantineau entitled "Telus union lets animals do the talking" (January 21, 2004) which showed an image of the Union's Dalmation dogs ad. *The Calgary Herald* ran a story by Tamara Gignac entitled "Telus and its union in battle over ads" (January 21, 2004) which compared an image of a Telus piglet to an image of a Union pig. However, when I tried to search the internet for these stories in February of 2004, using each newspaper's search engine (which offered a search of the past six months), I was confronted with the same results: "This story is no longer available." Both the *Vancouver Sun* and the *Calgary Herald* are owned by CanWest Corporation, who also owns the Internet news content provider Canada.com, the sole search engine available for accessing its newspapers' online archives. The sudden loss of electronic memory of the Union ads in the media in western Canada is illustrative of the control of communications culture by the interlinking interests of powerful media agencies. I was, however, able to locate hard copies of the articles through the newspaper holdings of Edmonton's public library system.

Not all of the images in the ad campaigns of Telus Mobility are of animals. Flowers, leaves, peapods and starfish also figure prominently. Significantly, whenever Telus addresses "savings" in its promotional texts, it mimics nature's money by proffering a picture of sand dollars. In this anthropological image of natural tokens, capital is identified with found designs crystallized out by organic forces of sea and sand, aesthetically effacing the material costs of telemobility.

Postscript

Cannibalism in the Capitalist Globe-Mobile

Late capitalism has been associated with a shrinking, swirling *mise-en-abyme* of mobiles inside of mobiles, media inside of media. Zooming in from the "globe-mobile," where few if any sites remain immune from the effects of capital, one narrows in on arteries coursing with automobiles, and inside the automobiles, mobile phones, whose affluent human users can dial the globe-mobile and call up digital screens on which they spiral back out to the worldwide web. What looms with the proliferation of mobiles inside of mobiles are the increasingly closed loops of global capitalism, along with their involuted conditions and harrowing effects.

As the ability to distinguish between nature and capital dwindles within the globe-mobile of market culture - that is, as nature increasingly ceases to be produced in any form able to meaningfully contend with the dual rendering of nature as metaphorical and material capital – mimetic technologies increasingly manufacture the semblance of difference between "first nature" and "second nature" (i.e. culture) so generative of symbolic and economic interest. Market cultures intensively speculate in signs of non-capitalized life even as they accelerate machinations to convert all nature into capital. In this, capital enacts in macro the paradox that the automobile enacts in micro: capitalizing away the difference of nature that is in part its "destination," its discursive conditions of future surplus value. Even when "nature is gone for good," then, capitalism cannibalizes itself to ensure a future (Jameson, *Postmodernism* x).[1] Through the recycling of nature signs and the re-processing of already capitalized material resources, a perennially undead nature can be kept in

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[1] I take it that Fredric Jameson has some idea of a "first nature" in mind when he writes that "Postmodernism is what you have when the modernization process is complete and nature is gone for good" (*Postmodernism, or, the Cultural Logic of Late Capitalism* x).

"interminable survival," as Derrida puts it in describing current conditions of animal life ("The Animal" 394). If cannibalism of its aesthetic economies gives rise to *simulacra* and an endless re-processing of reality effects, cannibalism of its material conditions makes global capitalism into a giant rendering industry, into the sorting and reconstitution no longer of any so-called "first nature," but of nature as by-product, capitalized in advance.

This convoluted folding of capitalist culture in upon itself spawns unpredictable and disturbing forms of "mimetic excess" in its linked symbolic and material economies (Taussig, *Mimesis* 252). Global outbreaks of Bovine Spongiform Encephalopathy (BSE), or "mad cow disease," over the past two decades, attributed to the practice of "animal cannibalism" (that is, the practice of feeding the remains of ruminants back to livestock in order to speed animals to market), have provoked a material crisis in the protein life of advanced capitalism. In capitalism's seemingly unrelated economies of representation, digital technologies have provoked a different mimetic crisis through their unrestrained cannibalism of aesthetic effects, a crisis of simulacra. In the aesthetic closed loops of simulacra, "nature" is recycled as a signifying effect detached from any external material referent, while in the closed loops of animal cannibalism, it is recycled as mere material.

Through a theory of rendering, I have tried to bring the double logics of producing nature as aesthetic effect and as abject material (animal nature, in particular) into uncomfortable proximity. I would dare to suggest, as I widen out from specific case studies to explore how a politics of rendering might bear upon the larger globe-mobile of contemporary capitalism, that animal cannibalism is the pathological substance of the sign of simulacra, and simulacra the sympathetic double of animal cannibalism. Although mad cow disease and simulacra both began to erupt in the latter decades of the twentieth century as symptomatic crises of late capitalism, I'm not suggesting that their historic appearances are causally linked. Rather, it is as contradictory yet complicit conditions of existence of global capitalism that they are related, as supplemental logics of a biopolitical reproduction of "life itself."

In theorizing rendering, I've developed three historical case studies to interrogate how capital is biopolitically produced in the contradictions between its representational and carnal economies. Cultural critiques which continue to analyze semiotic and material economies in isolation are no longer sufficient, a theory of rendering suggests, to tracking capital in the profound complicity and supplementarity of its aesthetic and economic logics, i.e. in its mimetic productivity. In an effort to critically engage the productive contradictions of capital, I have among other things cross-interrogated the aesthetic disposition of cinema and the economic returns of industrial slaughter (in "Automobility"), the representational technology of animal mascotry and the material machinery of mining (in "Industrial Mobility"), and the advertising archive of a Canadian telecommunications corporation and the geopolitics of Congolese coltan (in "Telemobility").

My dissertation opened with an image of the animal-nation in a 2002 advertisement for *Maclean's* magazine, an ad presenting the anatomy of a beaver as an organic metaphor for the national geography and "imagined community" of Canada (Anderson 1983). The normally generative identification of "Canada" with the biological sign of animal life was threatened, however, when a dead cow from an Alberta farm was diagnosed with BSE in 2003. Canadians rallied together to exorcize the taint of bad meat suddenly staining the nation. Canada's Prime Minister at the time, Jean Chrétien, and Alberta's Premier, Ralph Klein, made dramatic public displays of cooking, serving, and consuming Canadian beef, modelling a metabolic commitment to the health and "*carno-phallogocentrism*" of the nation through patriotic displays of meat-eating (Derrida, "Eating Well" 113). The purity of a nation's meat is not only representative, on a deeply affective level, of its economic legitimacy; meat also enciphers ideological investments in the masculinist virility and racial purity of the national "body." The act of consumption asked of Canadians (and of Albertans, in particular) through the public barbecues of prominent figures was disseminated through the rousing calls of the mass media to "Eat beef for the sake of our farmers, and our province" (a January 3, 2004 headline in *The Edmonton Journal*).[2]

Although the nation was metabolically modelling trust in the purity of its meat in the hopes of averting a crisis of animal capital, the U.S. immediately closed its border to Canadian beef and livestock. Animals became one of the pathological populations justifying the resurrection of impenetrable national borders in terrorizing times. In the desire to contain the pathological effects of a global traffic in rendered material, the U.S. Food and Drug Administration led the effort to trace a second diseased cow, this time found in Washington State, back to Canada, exonerating itself of the excesses of rendering. The U.S. border closure, which is still largely in effect, disavows the fact that agribusiness multinationals such as Cargill and XL Foods have been making quantum profits off of animal capital by "transcending" national differences to operate more cheaply out of Mexico and Canada. Around the recent North American crisis in animal capital, it became apparent that in the imperial rule or

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[2] John Peck, in an article in *Z Magazine* entitled "The Mad Cows Finally Come Home" (Volume 17, No. 3), notes that British politicians had likewise modeled a commitment to faithful meat-eating during the BSE epidemic there in the 1980s and 90s: "In one of the more bizarre public relations attempts to boost consumer morale, British agriculture secretary, John Gummer, fed a hamburger to his four-year-old daughter before television cameras in 1990. Three months later British health minister, Stephen Dorrell, was before Parliament telling the world that mad cow could also sicken humans. Six years later, the first victims emerged. Over 140 people have now died in Europe…" (March 2004 <http://zmagsite.zmag.Mar2004/peck0304.org/html> May 2, 2004).

"empire" of global capitalism, the power to trade freely across national territories (regardless of the reticence or willingness of nations outside the G-8 power block), is calibrated with the alternate power to strategically re-entrench national and cultural differences in the name of policing pathological bodies.

When mad cow disease first erupted as an epidemic in Great Britain in 1985, exposing the widespread practice of feeding rendered brains, spinal cords, and nervous tissues of ruminants back to livestock toward the rapid turnover of animal capital, the kind of mimetic excess created by capital's closed loops began to loom large. BSE is caused by a novel infectious protein (christened a "prion" by the scientist who discovered it[3]), an agent which is itself an uncannily mimetic product of the protein recycle from which it springs. Prions slowly consume the brains of animals stricken with mad cow disease (and of people stricken with its human variant, Jacob-Creutzfeld disease), eating holes in the brain until it is reduced to "mere jelly." In the mimetic vengeance of the wasting disease – turning back onto both humans and animals the kind of material abjection which capital renders upon nature – mad cow is indeed suggestive of what Taussig calls "the mimesis of mimesis," or "mimesis made aware of itself" (246).

The rogue proteins causing mad cow disease assume a monstrous aspect in their resistance to being "cooked" by culture. Studies in the wake of Britain's mad cow epidemic report that prions pass unaffected through the tremendous heats and sterilizing treatments of the industrial rendering process. Rather than reading in the monstrousness of prions an irrepressible alterity of animal life, however, it is crucial to read their monstrosity as a product of capital's biopolitical organization of "life itself." If there are forms of alterity haunting cultures of capital, they call to be understood less as a primal surplus of animal life which somehow "désists" production, than as a species of stomach trouble symptomatic of the churning insides of biopolitical culture.[4]

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[3] Dr. Stanley Prusiner won the 1997 Nobel Prize in medicine for his discovery of prions.

Whether the "mimesis of mimesis" posed by pathological prions is capable of provoking an actual crisis for capital, or simply an emergency which gets folded back into its continued hegemony, is the pressing question of the moment. The answer in part depends upon whether the mimetic vengeance of mad cow disease can be seized as an occasion to politically antagonize the biopolitical rule of capital (as I have tried to do in my dissertation), or whether it will be deployed by those invested in animal capital as an opportunity to further extend and tighten capital's mimetic management of "life itself." Subsequent to the mad cow epidemic in the United Kingdom two decades ago, it was just such a biopolitical heightening of control which strove to settle the question, restoring normalcy to and faith in capitalist food chains. Britain legislated that every livestock animal be given a "passport" (at first stapled to its ear, now increasingly in the form of an embedded chip) so that its movements from farm to farm could be tracked. Along with so-called terrorists screened at increasingly discriminating borders, livestock is now placed under tight surveillance as a potentially pathological population threatening infection for national (and international) bodies. Animal passports, genealogical charts, genetic profiles, and BSE testing bespeak an attempt to contain and to apportion "ownership" of disease within a global economy of animal capital; they also intensify the contradiction between virtually indistinguishable forms of social registration and life-documentation used to biopolitically monitor human and animal populations, and continuing discourses of speciesism which allow for a "non-criminal putting to death" of the latter (Derrida, "Eating Well" 112).

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[4] Philippe Lacoue-Labarthes theorizes the ineluctable alterity of mimesis through the complex notion of "désistance" in *Typography: Mimesis, Philosophy, Politics* (1989).

If mimetic excess in the U.K. was managed in ways which allowed animal capital to return to normalcy, the crisis has nevertheless reopened with North American incidents of mad cow disease. Yet almost immediately, the power to turn crisis into capital is everywhere in evidence. In Alberta, for instance, an Auditor General's report investigating allegations that multinational meatpackers had benefited from the crisis in animal capital confirmed that their profits had, astoundingly, trebled in 2003 (*Report of the Auditor General* 2004). As Bill Brown writes in a different context, "the dynamics of capital have a history of converting any such excess into surplus" (*Material* 11-12). In the incitement to eat beef, in government subsidies for ranchers and meatpackers, and in the determination to build up national slaughtering and rendering facilities to lessen Canada's dependence upon U.S. meatpackers, the currency of animal capital in North America has been re-nationalized and reorganized, but not convincingly challenged. Before normalcy resumes in North American cultures of animal capital, however, I hold out hope that there is an opening in which to develop the mimetic vengeance of "rogue proteins" into a politics of rendering capable of protesting our biopolitical times.

It has long been imagined, beginning with Marx, that the internal contradictions of capitalism will eventually lead to its own undoing and overcoming (a hope which critical discourse analysis and immanent critique similarly invokes). Even Jean Baudrillard hints that capitalism will ultimately deteriorate in the merciless "desert of the real" created by its own logic of simulacra (*Simulacra* 1):

> Hyperreality and simulation are deterrents of every principle and every objective, they turn against power the deterrent that it used so well for such a long time. Because in the end, throughout its history, it was capital that first fed on the

> destructuration of every referential, of every human objective, that shattered every ideal distinction between true and false, good and evil, in order to establish a radical law of equivalence and exchange…. (22).

While the aim of my dissertation has been to provoke productive contradictions into unproductive antagonism for cultures of capital through a material politics of mimesis, a theory of rendering also complicates the hope that capital's contradictions might be turned against it, and sobers such a political objective. For the sinister prospect accruing to the biopolitical double logic which rendering describes is that of capitalism's potential interminability, a perpetual existence supported by its ability to materially and semiotically recycle itself *ad infinitum*. Those living in the globe-mobile of market culture have to contend with the possibility that capitalism may not bump up against the limit of finite resources nor unravel from its internal contradictions, not even the crises of rendering suggested by simulacra and mad cow disease. On the contrary, it appears to be infernally surviving and thriving.[5]

Caught in the double bind of mimesis under capital, there seem few modes of political intervention capable of breaking its symbolic-material loops to produce other signs of nature and culture. Irregularities and recrudesences of animal rendering – unpredictable, pathological products of the closed loop itself such as mad cow disease – have thrown the harrowing involutions of capital into exposure, but they are not, yet, a formulation of political struggle. The theory of rendering I have developed thus begins, and hopefully persists, as a question asked from within a double bind and addressed to a heterogeneity of protesting subjects (including theorists and activists) struggling to articulate livable alternatives to biopolitical capitalism.

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[5] Derrida describes current conditions of animal life as "an artificial, infernal, virtually interminable survival, in conditions that previous generations would have judged monstrous, outside of every supposed norm of life proper to animals that are thus exterminated by means of their continued existence or even their overpopulation" ("The Animal that Therefore I Am (More to Follow)" 394).

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